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Cancer Commission of Harvard University

FIFTEENTH ANNUAL

REPORT

OF THE

COLLIS P. HUNTINGTON MEMORIAL HOSPITAL
FOR CANCER RESEARCH

AND OF THE

LABORATORIES

OF THE

CANCER COMMISSION OF HARVARD UNIVERSITY

1926-1927

(FOR THE YEAR ENDING JUNE 30, 1927)

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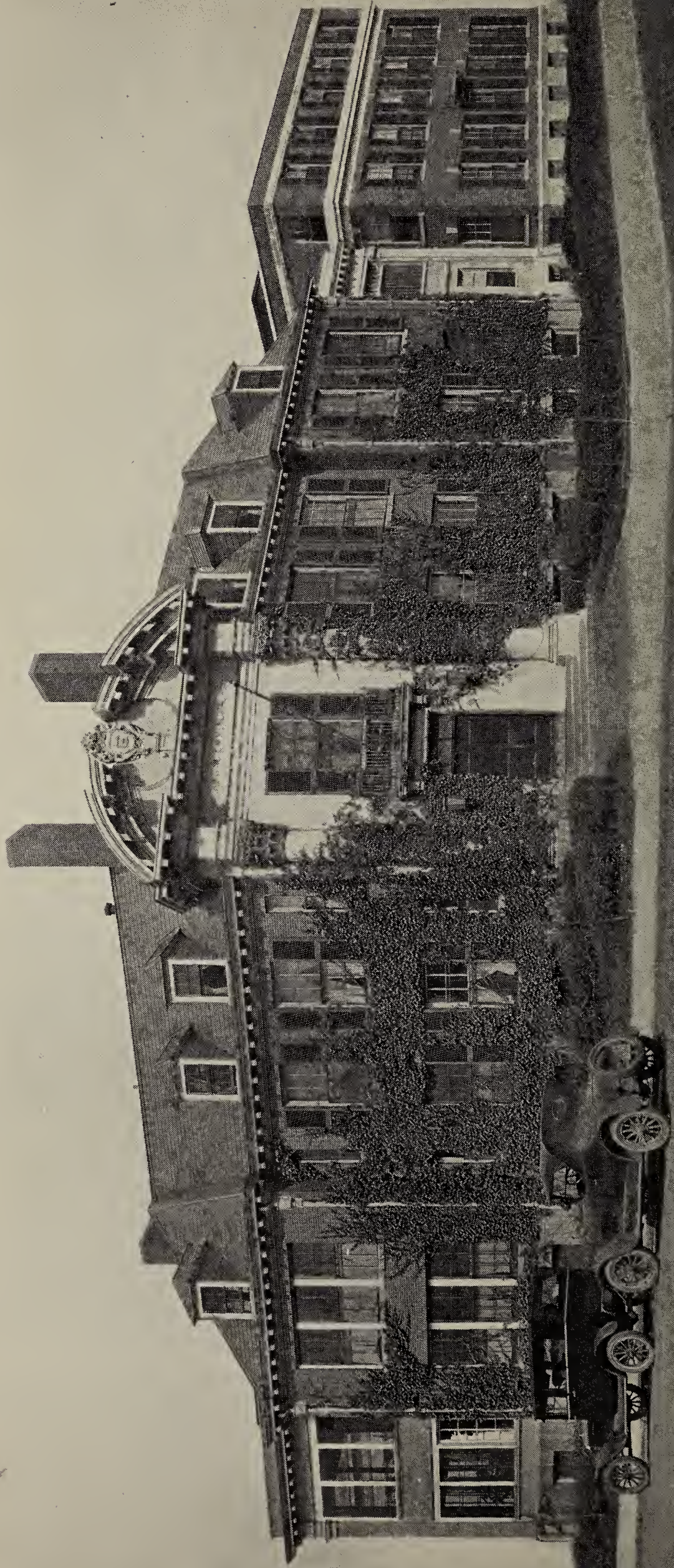
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THE COLLIS P. HUNTINGTON MEMORIAL HOSPITAL AND THE WARREN LABORATORY.
COOLIDGE & SHATTUCK, ARCHITECTS.

Cancer Commission of Harvard University

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FORM FOR DONATIONS AND BEQUESTS

I give, devise and bequeath unto the President and Fellows of Harvard College, the sum of \$. to be used for the work of the Cancer Commission of Harvard University.

In case the Commission should decide at any time that the cause and treatment of cancer had been sufficiently determined I authorize them to devote this bequest to some other unsolved problem of medicine.

THE
CANCER COMMISSION OF HARVARD UNIVERSITY
FOUNDED BY CAROLINE BREWER CROFT
JUNE 16, 1899

President A. LAWRENCE LOWELL, *Chairman*
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WILLIAM J. CROZIER, PH.D., *Professor of General Physiology*
SAMUEL R. DETWILER, PH.D., *Assistant Professor of Zoology*
WILLIAM DUANE, PH.D., *Professor of Biophysics*
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GEORGE R. MINOT, M.D., *Assistant Professor of Medicine*
ERNEST E. TYZZER, M.D., *Professor of Comparative Pathology*
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E. B. WILSON, PH.D., *Professor of Vital Statistics*
S. BURT WOLBACH, M.D., *Professor of Pathological Anatomy*
HANS ZINSSER, M.D., *Professor of Bacteriology and Immunology*
CHANNING C. SIMMONS, M.D., *Secretary*

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RAPHAEL ISAACS, M.D., *Assistant Physician*
M. C. SOSMAN, M.D., *Consulting Roentgenologist*
LAWRIE B. MORRISON, M.D., *Consulting Roentgenologist*
R. G. VANCE, M.D., *Roentgenologist*
ARTHUR M. GREENWOOD, M.D., *Dermatologist*
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V. H. KAZANJIAN, M.D., *Assistant Laryngologist*
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WILLIAM DUANE, PH.D., *Professor of Biophysics*
WILLIAM T. BOVIE, PH.D., *Assistant Professor of Biophysics*
S. B. WOLBACH, M.D., *Pathologist*
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REPORT OF THE DIRECTOR
OF THE
CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I have the honor to submit the following report for the fiscal year ending July 1, 1927.

Meetings of the Commission were held on November 11, 1926, and May 5, 1927; at which the work in progress in the laboratories and in the hospital was discussed as well as that contemplated in the immediate future. A special committee consisting of Drs. Wolbach, Zinsser, Crozier, Weston and Greenough was appointed to consider the general policy and program of the work of the Commission for 1927-28, and made its report in May, 1927.

One member of the Commission, Dr. W. T. Bovie, a member of the Laboratory Staff as well, and an assistant Professor of Biophysics in the University presented his resignation as of September 1, 1927, in order to accept the Professorship of Biophysics in Northwestern University, Chicago. Another member, Dr. E. R. Detwiler, also resigned to accept a Professorship at Columbia University.

By the death of Dr. J. Collins Warren on November 3, 1927, the Cancer Commission of Harvard University lost its best friend and most ardent supporter; the one to whom it veritably owed its corporate existence, and the one to whom more than any one else it owes the staunch financial support in gifts, bequests, and annual contributions on which its continued activity depends.

To those who were associated with Dr. Warren in this undertaking, it will be a never-failing satisfaction to remember that the Laboratory building, which was built in 1922, should have been given by the Corporation of Harvard University the name of the J. Collins Warren Laboratory, and that this recognition of his services to the University was so appreciated by him that among all the many honors conferred upon him at home and abroad, he held this to be supreme.

The finances of the Commission at the close of the fiscal year are in a satisfactory condition. The year's expenses showed a book excess of expenses over income of \$3,992.39, owing to the fact that a contribution of \$5,000.00 promised before July 1st was not received until later in that month, and could not on that account be credited to 1926-1927. In spite of this fact the net resources of the Commission were increased \$12,006.71 during the year.

The hospital and the laboratories have been in active operation during the year, and an actual increase is recorded in the number of new patients presenting themselves at the Huntington Hospital for examination and treatment. This clinic is gradually assuming the function of a clearing-house for cases of cancer and suspected cancer in this vicinity. Some cases can be returned to their family physicians for treatment; others are referred to other hospitals and institutions for special forms of treatment, and certain cases present themselves for routine diagnostic examination, in which no treatment is required. The opportunity thus afforded for selection of cases or groups of cases for study and for special treatment by the Huntington Staff is an important advantage to the work of the Commission. A detailed account of the hospital service is given in the report of the Surgeon, Dr. C. C. Simmons.

The opening of the Palmer Memorial Hospital in Brookline, by the New England Deaconess Association, and of the Pondville Hospital at Norfolk, and the State Cancer Clinics under the supervision of the Department of Public Health of the State of Massachusetts, have provided a great increase in the facilities for the diagnosis and treatment of cancer in Massachusetts. The attendant publicity has undoubtedly brought many cases of cancer and of suspected cancer to seek medical advice, and in this increased patronage the Huntington Hospital has had its share. The closest cooperation has been evident, in the organization and operation of these newer institutions, and it is probable that few communities have enjoyed a more harmonious and effective effort to reduce the cancer death rate than that which has been developed in Massachusetts during the past two years. In this movement the Massachusetts State Health Department, the general hospitals and the special hospitals and laboratories for cancer, the regular social agencies,

the American Society for the Control of Cancer, the medical profession and the public have taken part; and no small share in this work has been done by the members of the staff of the Cancer Commission.

A review of the work carried on by the Commission in 1926-1927 is provided by the reports of the heads of departments, which may be briefly summarized as follows:

Professor William Duane has been in charge of the Radium and X-ray plants, during the year, and has supervised the addition of the Radium belonging to the Palmer Memorial Hospital and that of the Massachusetts General Hospital to the apparatus containing the Cancer Commission radium. The radon (emanation) from all of this radium is now collected, purified and placed in tubes by the Cancer Commission and delivered in due proportion to each hospital for clinical use. Preparations have been made for the installation of a new high-voltage X-ray apparatus at the Huntington Hospital, which will provide accommodation for a larger number of patients, and do away with the delays now necessary in booking treatments long in advance.

Dr. Duane is one of the two United States members of an international committee of physicists and roentgenologists on the measurement of X-ray dosage, and he and his assistants have devoted much of their time to securing data on this subject, as well as in getting together apparatus for a special research upon X-ray effects which will be taken up in the future.

Dr. W. T. Bovie's department of Biophysics conducted a varied series of investigations during the year, the results of which are of very considerable practical, as well as theoretical, importance.

Miss E. E. Jones continued her study of transplantable mouse-tumors, and of the factors of immunity and of susceptibility shown in different pure-bred races, as influenced by the simultaneous implantation of foreign bodies. The problem was studied from the genetic point of view, and chemical studies were also carried on by Miss Rourke in the effort to determine the chemical constituents of the blood in which this susceptibility and immunity reside.

Drs. Anson and Mirsky have made a most interesting study of coagulation of proteins and have shown that, though hitherto considered a permanent and irreversible phenomenon, certain

proteins may be coagulated and subsequently dissolved into their original form, and recoagulated. The reversible character of this reaction, places it within the category of biological changes, and offers an important field for further investigation in the living tissues.

Under Dr. Bovie's supervision further studies have been made of ultra-violet light, both as to its therapeutic administration and as to its measurements, and the comparison of the amounts received in sunlight and from artificial sources. Practical tests of certain substitutes for window glass, supposed to transmit ultra-violet radiation, have been made.

A very notable contribution to the resources of the surgeon dealing with cancer has resulted from the investigation and construction by Dr. Bovie of electrical apparatus designed to make practical use of the cutting as well as of the coagulating effects upon tissues of the high-frequency current. The advantages of this method of operating in certain regions of the body, and with certain special types of tumors, are beyond dispute, and the apparatus has been in routine use in the Huntington Hospital, and has also been employed by Dr. Harvey Cushing in the removal of brain tumors at the Brigham Hospital. This apparatus has furthermore been equipped with interchangeable electrodes and with switches so arranged as to preserve absolute surgical asepsis, and an additional safeguard is provided in a device for the employment of thermo-couple temperature indicators, which can be placed in such a way as to determine exactly the depth to which the coagulating and cauterizing effect extends.

The Medical Department, under Dr. Minot, has continued in the wards and in the laboratory the study of the blood diseases. The method of treatment of pernicious anæmia by a liver diet developed by Drs. Minot and Murphy has been modified and perfected by the employment of a fractional extract of liver prepared by Dr. Edwin J. Cohn of the Harvard Medical School. This material may now be administered in a concentrated and more palatable form, and under this treatment no case of pernicious anæmia has failed to show improvement. All patients adequately treated have maintained this improvement in the three years that have elapsed since this form of treatment has been instituted; a result which justifies considering this addition to practical medicine as one of the most important to the

steps in the alleviation and control of the diseases of mankind.

The use of forms of liver extract in other diseases has also been investigated, both in the hospital and in the laboratories, with the assistance of Drs. Mueller and Zinsser of the Department of Bacteriology in the Medical School.

The study of the respiration and metabolism of the blood cells was continued by Miss Daland, and further studies of this nature have been begun by Dr. Henry Jackson, Jr., dealing with cancer and other tissues. New chemical methods have been devised for this purpose, and an extensive investigation is planned of the effects of diet, and of vitamins and other such agents upon the growth of normal and malignant cells.

The clinic provides an abundance of material for the study and treatment of the leukæmic blood diseases, and many aspects of these diseases have been investigated. In all this work the cooperation of the different departments of the Harvard Medical School and of the allied hospitals must be acknowledged, as well as some financial support from the Proctor Fund of the Medical School.

The study of the Rous Chicken Sarcoma was continued in the Bacteriological Laboratory of the Harvard Medical School by Dr. Zinsser and Dr. J. H. Mueller, supported by the DeLamar Fund and the Cancer Commission of Harvard University. These experiments were not conclusive; but the importance of the Gye hypothesis, that an ultra microscopic organism might play a part in the production of this tumor, appeared to justify the continuance of the work, and arrangements were perfected which permitted Dr. W. E. Gye to come to Boston in September, 1927, as the guest of the Cancer Commission, to continue the experiments in the hope that a positive and definite conclusion on this important matter might be reached.

The Pathological Department conducts a Free Diagnosis Service for pathological material, which is supported by the State Department of Public Health and is available for every physician registered to practice in Massachusetts. During the past year 2,384 specimens were examined and reported in this service. This material was sent in from 65 hospitals, and 486 physicians distributed widely over the State.

In addition to the State diagnosis service, 658 specimens were

examined from the Huntington Hospital and eleven autopsies were performed.

Both the Huntington Hospital and the laboratories are used for teaching as well as investigation. Instruction to graduates and undergraduates is given in the departments of surgery, medicine, laryngology, and pathology of the Harvard Medical School; and during the past year courses were given in Cambridge to graduates and undergraduates of the College in Physics and in Biophysics.

The members of the staff are frequently called upon to give demonstration clinics and lectures to groups of physicians and before medical societies, both in the hospital and in other places.

During the coming year (1927-1928) the work of the hospital will be carried on as in the past, and will be modified only in so far as the development of other additional clinical facilities for routine treatment make possible a greater degree of selection in the choice of cases for admission. The investigative work will be devoted chiefly to the study of those conditions and agents which appear to exert some action in the control or promotion of growth in living tissues, both normal and malignant.

Respectfully submitted,

ROBERT B. GREENOUGH, *Director.*

July 1, 1927.

REPORT OF THE VISITING SURGEON

TO THE

CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: The routine work of the hospital has been carried on during the fiscal year of 1926-1927 in the usual manner, although a few changes have been made in the work.

During the year 1,753 new cases applied for examination at the hospital, 261 more than in the previous year; this figure representing the greatest number of new patients seen in any one year since the opening of the institution. There were 7,257 outpatient visits as compared to 6,575 in 1925-1926, and 6,703 inpatient days; 1,011 cases were admitted to the wards during the year, the average length of time each patient remained in the hospital being slightly longer than in previous years as more patients were admitted for study. Of the in-patients, 14 per cent were treated as charity cases, 70 per cent paid \$21.00 a week or less for board and 16 per cent paid more than \$21.00 a week for private rooms.

It was expected that the number of cases in the general clinic would diminish this year as clinics of a similar nature have been opened at the Boston Dispensary, the Massachusetts General and the Palmer Memorial Hospitals. In addition, cancer clinics have been opened under the auspices of the Department of Public Health in Newton, Worcester, Springfield, Lynn, Lowell and Fall River. A State Cancer Hospital has also recently been opened at Pondville. Instead of diminishing the work of the hospital, however, the publicity has apparently stimulated interest in the disease and has thus led more people to seek advice for incipient or suspected cancer.

The clinic that has recently been opened at the Palmer Memorial Hospital under the auspices of the New England Deaconess Hospital Association is very similar to that at the Huntington Memorial Hospital and it is expected that there will be close cooperation between the two institutions. The members of the

staff have aided in the establishment of all of these clinics and have acted in an advisory capacity to the State Board of Health in the establishment of the State Hospital in Pondville. Dr. Daland is Visiting Surgeon to that institution, and many of our staff are connected with the Palmer Memorial Hospital.

In the spring of 1927 the Peter Bent Brigham Hospital made extensive alterations in their X-ray department and during that time the X-ray facilities of this hospital were put at their disposal.

The following table shows the number of cases treated:

<i>Year</i>	<i>Number Patients</i>	<i>O.P.D. Visits</i>	<i>In- patient Days</i>	<i>Operating Expenses</i>	<i>Total Hospital Earnings</i>
1912-1913	190*	482	5,372	\$23,358.41	\$4,053.91
1913-1914	360*	1,634	5,529	26,115.62	4,607.72
1914-1915	509*	3,676	5,725	25,278.78	9,811.08
1915-1916	508†	3,833	6,118	26,888.36	13,078.08
1916-1917	571†	4,488	6,602	29,266.00	15,176.46
1917-1918	767†	4,286	6,660	29,791.39	16,006.98
1918-1919	901†	4,420	6,484	33,692.45	20,744.18
1919-1920	1,286†	6,105	7,054	47,361.97	30,147.13
1920-1921	1,420†	6,820	6,511	66,157.03	39,143.41
1921-1922	1,636†	7,331	5,466	65,450.60	46,930.12
1922-1923	1,599†	7,748	6,115	72,332.09	47,714.00
1923-1924	1,629†	7,391	6,342	80,233.14	48,691.46
1924-1925	1,642†	7,178	6,150	82,438.18	54,401.99
1925-1926	1,492†	6,575	6,463	88,478.29	54,755.29
1926-1927	1,753†	7,257	6,703	93,691.20	53,413.65

*Old and new patients.

†New patients only.

The list of new patients presenting themselves during the year is given below in tabular form arranged according to the classification of diseases adopted by the Boston hospitals and based on the numbers in the "International List of Causes of Death."

	<i>Male</i>	<i>Female</i>	<i>Total</i>
CARCINOMA			
Breast.....7-47a	0	95	95
Buccal Cavity.....7-43a			
Cheek.....	17	4	21
Jaw, lower.....	14	1	15
Jaw, upper.....	4	2	6
Lip.....	52	2	54
Palate.....	6	0	6
Tongue, floor of mouth.....	61	4	65
Tonsil.....	6	0	6
Total.....7-43a	160	13	173
Female Genital Organs.....7-46a			
Cervix.....	0	139	139
Ovary.....	0	8	8
Uterus.....	0	19	19
Vagina.....	0	3	3
Vulva.....	0	6	6
Total.....7-46a	0	175	175
Male Genital Organs.....7-49a			
Penis.....	7	0	7
Prostate.....	6	0	6
Seminal vesicles.....	2	0	2
Testicle.....	1	0	1
Total.....7-49a	16	0	16
Peritoneum, Intestines, Rectum, etc.....7-45a			
Rectum.....	12	13	25
Sigmoid.....	0	1	1
Total.....7-45a	12	14	26

	<i>Male</i>	<i>Female</i>	<i>Total</i>
CARCINOMA (<i>Continued</i>)			
Skin.....7-48a			
Of Body.....	3	2	5
Of Extremities.....	5	3	8
Cheek.....	35	33	68
Chin.....	4	5	9
Ear.....	19	4	23
Eyelid.....	18	9	27
Forehead.....	17	21	38
Lip.....	4	4	8
Neck.....	8	5	13
Nose.....	39	49	88
Scalp.....	1	1	2
Total.....7-48a	153	136	289
Stomach, Liver, etc.....7-44a			
Large intestine.....	1	0	1
Epiglottis.....	1	0	1
Esophagus.....	13	0	13
Hypopharynx.....	5	1	6
Nasopharynx.....	2	3	5
Pharynx.....	3	4	7
Stomach.....	13	6	19
Total.....7-44a	38	14	52
Urinary Organs.....7-49a			
Bladder.....	3	4	7
Urethra.....	0	2	2
Total.....7-49a	3	6	9
Other Sites			
Antrum.....7-49a	2	5	7
Branchial Cleft.....	6	0	6
Larynx.....	3	2	5
Lung.....	1	0	1
Nose.....	2	1	3
Thyroid.....7-49a	0	1	1
Total.....	14	9	23

	<i>Male</i>	<i>Female</i>	<i>Total</i>
SARCOMA			
Antrum7-49f	1	0	1
Angiosarcoma skin.....7-49f	2	0	2
Fascial sarcoma.....7-48f	1	1	2
Fibrosarcoma skin.....7-48f	1	3	4
Ovary.....7-46f	0	1	1
Melanotic sarcoma.....7-48f	6	3	9
Osteogenic sarcoma			
Tibia.....7-49f	1	0	1
Ilium (Ewing type).....7-49f	1	0	1
Round cell sarcoma of uterus.....7-46f	0	1	1
Malignant disease unspecified (sarcoma)...7-48f	0	1	1
Total.....	13	10	23

MISCELLANEOUS			
GLIOMA.....7-49m	14	8	22
EMBRYOMA			
Testicle.....7-136	3	0	3
HYPERNEPHROMA			
Kidney.....7-49	1	1	2
MALIGNANT DISEASE (Unspecified)....7-49	9	5	14
LYMPHOBLASTOMA (Hodgkin's Type)...7-65	7	7	14
MALIGNANT LYMPHOMA—lymphoblas-			
toma.....7-65	7	6	13
LYMPHOSARCOMA.....7-65	0	1	1
MIXED MALIGNANT GROWTH			
Salivary glands.....7-49g	9	3	12
MYELOMA, multiple.....7-49k	0	1	1
GIANT-CELL TUMOR			
Bone.....7-155	1	1	2
NEUROBLASTOMA			
Eye.....7-85	1	0	1
Total.....	52	33	85

	<i>Male</i>	<i>Female</i>	<i>Total</i>
NON-MALIGNANT TUMORS			
Adamantinoma.....7-49f	0	3	3
Adenoma, sebaceous			
Hypophysis.....7-84	3	3	6
Nose.....7-97	1	1	2
Cyst-adenoma			
Breast.....7-50	0	3	3
Ovary.....7-137	0	1	1
Adenoma			
Prostate.....7-135	1	0	1
Multiple of skin.....7-154	0	1	1
Angioma			
Skin.....7-50	13	13	26
Tongue.....7-50	0	2	2
Angioma cavernosum			
Lip.....7-50	1	0	1
Chalazion			
Eyelid.....7-85	0	2	2
Cyst, mucous of lip.....7-108	1	2	3
Cyst, ovarian.....7-137	0	2	2
Epulis, jaw.....7-50	1	1	2
Fibroma			
Lip.....7-50	1	4	5
Mouth.....7-154	1	0	1
Skin.....7-50	2	4	6
Fibromyoma of uterus.....7-139	0	33	33
Keloid.....7-50	8	7	15
Lymphangioma			
Tongue.....7-50	2	0	2
Temple.....7-50	0	1	1
Neurofibroma.....7-50	1	1	2
Nevus.....7-50	7	15	22
Papilloma			
Skin.....7-50	12	11	23
Tongue.....7-50	6	3	9
Polyp			
Nares.....7-50	0	1	1
Rectum.....7-50	1	0	1
Uterus.....7-50	0	5	5
Verruca.....7-50	14	16	30
Wen.....7-50	3	7	10
Total.....	79	142	221

	<i>Male</i>	<i>Female</i>	<i>Total</i>
SPECIAL SKIN DISEASES			
Acne Rosacea.....10-154	1	0	1
Acne Vulgaris.....	0	1	1
Comedones.....	0	2	2
Cornu.....	0	2	2
Dermatitis.....	0	4	4
Eczema.....	2	4	6
Keratosis.....	80	77	157
Keratosis, seborrheic.....	2	3	5
Lichenification.....	0	1	1
Lupus Erythematosus.....	1	6	7
Mycosis fungoides.....	1	1	2
Neurodermatitis.....	0	1	1
Psoriasis.....	2	1	3
Sarcoid.....10-154	0	1	1
Total.....	89	104	193

OTHER CONDITIONS**SECTION I. SPECIFIC INFECTIOUS DISEASES,
GENERAL DISEASES****Abscess**

Breast.....1-142	0	2	2
Cheek.....1-108	0	1	1
Chest Wall.....1-153	1	0	1
Lymphnodes.....1-94	0	1	1
Retropharyngeal.....1-109	0	1	1
Tongue.....1-108	1	0	1
Vulva.....1-141	0	1	1
Actinomycosis			
Lung.....1-30	1	0	1
Arthritis, infectious.....1-156	1	0	1
Carbuncle.....1-152	1	0	1
Furuncle.....1-152	0	3	3
Impetigo contagiosa.....1-154	1	0	1
Infection of finger.....1-25	0	1	1
Lupus vulgaris.....1-36	2	1	3
Paronychia.....1-153	0	2	2
Scarlet fever.....1-8	1	0	1
Sepsis.....1-41	1	0	1
Syphilis.....1-38	9	6	15
Tinea.....1-154	1	0	1
Ulcer, tuberculous.....1-31	1	0	1
Ulcer, phagedenic.....1-36	1	0	1
Ulcer, simple.....1-154	2	2	4
Tuberculosis.....1-31	4	7	11

<i>Forward</i>	28	28	56
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	Male	Female	Total
OTHER CONDITIONS (<i>Continued</i>)			
<i>Brought forward</i>	28	28	56
SECTION V. DISEASES DUE TO PHYSICAL AGENTS			
Burn.....5-179	0	2	2
SECTION VI. POISONINGS, INTOXICATIONS			
Brass poisoning.....6-67	1	0	1
SECTION VII. CONGENITAL MALFORMATIONS			
Branchial cyst.....8-159	1	0	1
SECTION IX. INJURIES			
Fracture of phalanx.....9-155	0	1	1
Incised wound.....9-155	1	0	1
SECTION XI. DISEASES OF THE CIRCULATORY SYSTEM			
Varicose veins.....11-93	0	2	2
SECTION XII. DISEASES OF THE LYMPHATIC SYSTEM			
Lymphadenitis.....12-94	2	2	4
SECTION XIII. DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS			
Anemia, chloritic type.....13-58	0	1	1
Anemia, pernicious.....13-58	2	5	7
Anemia, secondary.....13-58	0	2	2
Anemia, type unknown.....13-58	0	2	2
Banti's Disease.....13-58	1	1	2
Jaundice hemolytic.....13-124	1	1	2
Leukemia, lymphatic chronic.....13-65	7	9	16
Leukemia, myelogenous.....13-65	4	4	8
Hodgkin's Disease (See Section VII)			
SECTION XIV. DISEASES OF THE DUCTLESS GLANDS			
Hyperthyroidism.....14-61	1	1	2
Tetany, parathyroid.....14-61	1	0	1
SECTION XV. DISEASES OF THE NERVOUS SYSTEM			
Glossalgia.....15-82	2	1	3
Hemiplegia.....15-75	0	1	1
Herpes Zoster.....15-154	0	1	1
Hysteria.....15-82	1	0	1
Mastodynia.....15-82	0	3	3
Neuralgia.....15-84	1	0	1
Parkinson's Syndrome.....15-84	0	1	1
Psychoneurosis.....15-84	2	3	5
Vertigo.....15-84	1	0	1
<i>Forward</i>	57	71	128

	Male	Female	Total
OTHER CONDITIONS (<i>Continued</i>)			
<i>Brought forward</i>	57	71	128
SECTION XVI. DISEASES OF THE BONES, JOINTS, MUSCLES, TENDONS AND FASCIA			
Arthritis, hypertrophic.....16-156	0	1	1
Bursitis, deltoid.....16-156	0	2	2
Exostosis.....16-156	0	1	1
Synovitis, tubercular.....16-156	0	1	1
SECTION XVII. DISEASES AND INJURIES OF THE EYE AND EAR			
Blepharitis.....17-85	0	1	1
Otitis media.....17-86	0	2	2
SECTION XVIII. DISEASES OF THE NOSE AND ACCESSORY SINUSES			
Deviation nasal septum.....18-97	0	1	1
Epistaxis.....18-95	0	2	2
Ethmoiditis.....18-97	0	1	1
Perforation of septum.....18-97	1	0	1
Rhinolith.....18-97	0	2	2
SECTION XIX. DISEASES OF THE MOUTH, LIPS, CHEEKS, PHARYNX, TONSILS AND PALATE			
Fissure of lip.....19-108	0	1	1
Inflammation of mouth.....19-108	0	3	3
Leukoplakia.....19-109	10	2	12
Parotitis.....19-108	0	1	1
Pharyngitis.....19-109	0	1	1
Tonsillitis.....19-109	3	4	7
Ulcer of mouth.....19-108	0	1	1
SECTION XX. DISEASES OF THE JAW, TEETH AND GUMS			
Pyorrhea.....20-108	0	3	3
SECTION XXI. DISEASES OF THE TONGUE			
Inflammation.....21-108	0	3	3
Glossitis.....	2	0	2
Lingua geographica.....	1	0	1
Leukoplakia.....21-108	1	0	1
SECTION XXII. DISEASES OF THE ESOPHAGUS			
Stricture.....22-110	1	1	2
SECTION XXIII. DISEASES OF THE STOMACH			
Hyperacidity.....23-112	7	3	10
SECTION XXIV. DISEASES OF THE INTESTINES			
Adhesions.....24-118	0	2	2
Appendicitis.....24-117	0	1	1
Constipation.....24-119	0	3	3
Duodenal ulcer.....24-111	2	2	4
Visceroptosis.....24-119	0	5	5
Obstruction.....24-118	0	1	1
<i>Forward</i>	85	122	207

	<i>Male</i>	<i>Female</i>	<i>Total</i>
OTHER CONDITIONS (<i>Continued</i>)			
<i>Brought forward</i>	85	122	207
SECTION XXV. DISEASES OF THE LIVER AND GALL DUCTS			
Cirrhosis.....25-122	2	0	2
Cholecystitis.....25-124	0	3	3
SECTION XXVI. DISEASES OF THE PANCREAS			
Cyst.....26-125	0	1	1
SECTION XXVII. DISEASES OF THE ABDOMEN			
Hernia, ventral.....27-118	1	1	2
SECTION XXVIII. DISEASES OF THE RECTUM, ETC.			
Fissure.....28-119	0	1	1
Fistula.....28-119	1	1	2
Hemorrhoids.....28-93	1	0	1
Proctitis.....28-119	1	0	1
SECTION XXIX. DISEASES OF THE LARYNX			
Laryngitis.....29-98	1	0	1
Paralysis.....29-98	1	0	1
SECTION XXX. DISEASES OF THE TRACHEA AND BRONCHI			
Asthma.....30-105	1	1	2
SECTION XXXII. DISEASES OF THE PLEURA AND MEDIASTINUM			
Pleurisy.....32-102	0	2	2
SECTION XXXIII. DISEASES OF THE KIDNEYS AND URETER			
Hydronephrosis.....33-131	0	1	1
SECTION XXXV. DISEASES OF THE URETHRA (MALE AND FEMALE)			
Caruncle.....35-134	0	2	2
Stricture.....35-134	0	1	1
Urethritis.....35-134	1	0	1
SECTION XXXVI. DISEASES OF THE MALE GENERATIVE ORGANS			
Fibrosis of penis.....36-136	1	0	1
Prostatitis.....36-136	1	0	1
SECTION XXXVII. DISEASES OF THE FEMALE GENERATIVE ORGANS			
Antiflexion.....37-141	0	2	2
Atrophy of menopause.....37-141	0	4	4
Atresia.....37-141	0	1	1
Cystocele.....37-141	0	1	1
Endocervicitis, etc.....37-141	0	4	4
Endometritis.....37-141	0	5	5
Erosion.....37-141	0	7	7
Fibrosis.....37-141	0	7	7
<i>Forward</i>	97	167	264

	Male	Female	Total
OTHER CONDITIONS (<i>Continued</i>)			
SECTION XXXVII (<i>Continued</i>)			
Brought forward	97	167	264
Laceration.....37-141	0	6	6
Menorrhagia.....37-141	0	3	3
Prolapse.....37-141	0	5	5
Retroversion.....37-141	0	1	1
Salpingitis.....37-141	0	1	1
Ulcer.....37-141	0	1	1
SECTION XXXIX. DISEASES OF THE BREAST (MALE AND FEMALE)			
Abscess.....39-142	0	1	1
Cystic disease.....39-142	0	30	30
SECTION XLII. ILL-DEFINED OR UNCLASSIFIED DISEASES			
Apprehension.....42-	1	1	2
Gangrene.....42-	1	0	1
Malnutrition.....42-	1	0	1
No diagnosis.....42-	15	12	27
No disease.....42-	12	18	30
Total.....	127	246	373

CARCINOMA	
Breast.....	95
Buccal Cavity.....	173
Female Generative Organs.....	175
Male Generative Organs.....	16
Peritoneum, Intestines, Rectum, etc.....	26
Skin.....	289
Stomach, Liver, etc.....	52
Urinary Organs.....	9
Other Sites.....	23
Total.....	858
Carcinoma.....	858
Sarcoma.....	23
Other Malignant Tumors.....	85
Non-Malignant Tumors.....	221
Special Skin Diseases.....	193
Other Conditions.....	373
Total.....	1,753

Six hundred and seventeen operations were performed at the hospital during the year, or 64 more than the previous year. Many of these operations were of a minor nature but the ma-

jority were cases which required treatment by a combination of surgery and radiation or by electro-coagulation.

The list of operations is as follows:

OPERATIONS FOR 1926-1927

CARCINOMA

Breast	
Amputation and dissection of axilla	10
Buccal Cavity	
Excision and cauterization	13
Jaw	
Excision and cauterization	19
Lip	
Excision	27
Excision and dissection of neck	2
Palate	
Excision and cauterization	6
Tongue, floor of mouth	
Excision and cauterization	13
Neck dissection	1
Tracheotomy	1
Tonsil	
Excision and cauterization	4
Female Generative Organs	
Cervix	
Curettage and radium treatment	149
Fundus of uterus	
Curettage and radium treatment	6
Labia	
Curettage and radium treatment	1
Vagina	
Curettage and radium treatment	7
Vulva	
Vulvectomy	4
Male Generative Organs	
Penis	
Amputation with dissection of glands of groin	5
Dissection glands of groin	1
Scrotum	
Excision glands of groin	1
Peritoneum, Intestines and Rectum	
Esophagus	
Esophagoscopy and radium treatment	3
Hypopharynx	
Laryngoscopy	1
Curettage and radium treatment	1
Larynx	
Laryngoscopy	2
Tracheotomy	1
Dilation, seed insertion	2
Nasopharynx	
Radium treatment	2
Stomach	
Esophagoscopy	3
Rectum	
Curettage and radium treatment	8
<i>Carried forward</i>	293

<i>Brought forward</i>	293
Urinary Organs	
Bladder	
Cystostomy.....	I
Urethra	
Excision.....	I
Regions Not Elsewhere Mentioned	
Antrum	
Excision and radium treatment.....	I
Metastatic	
Radium treatment.....	I
Orbit	
Excision and cauterization.....	4
Skin	
Excision.....	76
SARCOMA	
Cheek, spindle cell	
Excision.....	I
Palate	
Excision.....	2
Fibrosarcoma	
Thigh	
Excision.....	I
Melanotic	
Excision.....	3
Round cell, multiple	
Excision.....	I
NON-MALIGNANT TUMORS	
Adenoma	
Excision.....	3
Angioma	
Excision.....	5
Cyst	
Excision.....	5
Giant-Cell Tumor	
Jaw	
Curettage.....	3
Fibroma	
Excision.....	14
Fibromyoma uteri	
Curettage and radium treatment.....	13
Keloid	
Excision.....	2
Nevus	
Excision.....	5
Neuroblastoma	
Exploration.....	I
Papilloma	
Bladder, excision.....	I
Buccal mucosa, excision.....	9
Larynx, excision.....	I
Skin, excision.....	3
Polyp	
Cervix	
Curettage and radium treatment.....	2
Nostril	
Excision.....	I
<i>Carried forward</i>	453

<i>Brought forward</i>	453
Verruca	
Excision.....	12
Wen	
Excision.....	6
SPECIAL SKIN DISEASES	
Keratosis	
Excision.....	8
Skin of Lip	
Excision.....	2
OTHER CONDITIONS	
Abscess	
Incision and drainage.....	10
Adamantinoma	
Excision.....	3
Alcohol injection for neuralgic pain.....	15
Appendectomy.....	1
Atresia, senile of vagina	
Radium treatment.....	1
Caruncle, urethral	
Curettage and radium treatment.....	5
Ether dressing.....	1
Fibrosis of uterus	
Curettage and radium treatment.....	1
Gangrene	
Amputation of right leg.....	1
Granulating wound	
Skin graft.....	17
Diathermy excision of simple ulcer.....	1
Chronic inflammation forehead	
Excision.....	1
Exostosis, subungual	
Excision.....	1
Ether examination.....	5
Removal of specimen for diagnosis.....	28
Endometritis and endocervicitis	
Curettage and radium treatment.....	8
Laceration of cervix, repair of.....	1
Lacerated wound, finger suture.....	1
Leukoplakia of mouth, cauterization.....	5
Mastitis, breast, amputation.....	1
Meatotomy.....	2
Mixed malignant tumor of parotid, excision.....	2
Osteomyelitis	
Sequestrotomy.....	1
Plastic operations.....	16
Prolapse of uterus.....	1
Stricture of esophagus	
Esophagoscopy.....	1
Tendon suture, hand.....	1
Tonsillectomy.....	1
Transfusion.....	4
Total operations.....	<hr/> 617

There were 26 deaths in the hospital during the year and autopsies were performed on 11 of these cases.

The policy of former years has been continued and groups of cases have been placed under the charge of one or more members of the staff for study. Dr. Leland has continued with the study and treatment of gynecological cases and is now assisted by Dr. Meigs, who has assumed charge of much of the routine work. Dr. Daland has continued his work on the use of electro-coagulation in surgery in conjunction with the Laboratory of Biophysics. This method has proved very valuable in certain operations. Dr. Greene, in charge of the Nose and Throat Clinic, was abroad during the winter of 1926-1927 and his work was carried on by Dr. Herman assisted by Dr. Kazanjian and Dr. Ernlund. Dr. Shedden and Dr. Hayden are conducting a rectal clinic on Monday afternoons, and Dr. Taylor and Dr. Rogers attend to the special clinic for children suffering with hemangioma on Wednesday mornings. The general clinics are held as follows:

Monday afternoon	Medical Clinic and Rectal cases
Tuesday morning	Medical Clinic
Tuesday afternoon	General Surgical Clinic
Wednesday morning	Children's Surgical Clinic
Wednesday afternoon	Nose and Throat Clinic
Thursday afternoon	Gynecological Clinic
Friday morning	Medical Clinic
Friday afternoon	General Surgical Clinic

Staff meetings were held each month during the winter at which a report on the activities of the hospital for the previous month was made, and some problem under investigation presented and thoroughly discussed. These meetings were well attended by the active and consulting staff, and visitors were also invited. A special clinic was given in December, 1926, for the benefit of the Canadian Interurban Club, and in January, 1927, for some visiting physicians from Pennsylvania. In February an entire day was given to a clinic and educational addresses, for the Public Health Nurses, at the request of the Commissioner of Public Health. This proved to be very successful and at his request will probably be repeated this winter.

Under our agreement with the John Hancock Mutual Life Insurance Company 70 of their policyholders were examined for suspected cancer, of which number 8 were found to be suffering from the disease.

One hundred and fifty-four cases were cared for by the Social Service Department, an increase of 16 cases over last year. Thirty-five patients required permanent care and were placed as follows:

House of the Good Samaritan	13
Private Hospitals	5
Palmer Memorial Hospital	2

Of the remaining 15 cases, 6 refused to enter an institution and 9 could not be placed in a hospital which was satisfactory to them. The Department is indebted to the Committee of the Permanent Charity Fund, Inc., for a gift of \$650 which has made it possible to render service by providing transportation, medicine, clothes and financial aid to many deserving patients. The Community Health Association and the American Red Cross Volunteer Motor Corps have been of great assistance and the Boston Branch of the National Fruit and Flower Guild has made many contributions to the hospital.

Respectfully submitted,

CHANNING C. SIMMONS, *Visiting Surgeon.*

July 1, 1927.

REPORT OF THE TREASURER

TO THE

CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I have the honor to submit to you my report for the year ending June 30, 1927.

Contributions to the funds of the Cancer Commission have been received by the Treasurer of Harvard College between July 1, 1926, and June 30, 1927, amounting to \$72,373.80. Of this amount \$56,373.80 was used for current expenses and \$16,000 was added to the invested funds.

The excess of expenses over income was \$3,992.39. This was subtracted from the Hospital Endowment Fund. The net increase in the funds of the Commission during the year was \$12,007.61.

The Treasurer of Harvard College on July 1, 1927, held the following funds for the benefit of the Cancer Commission of Harvard University:

EXHIBIT A

Memorial Cancer Hospital Endowment.....	\$114,816.56
Memorial Cancer Hospital New Endowment.....	2,500.00
Francis Bartlett Free Bed.....	5,000.00
T. Jefferson Coolidge for Cancer Research.....	2,000.00
Caroline Brewer Croft.....	92,025.00
William Endicott.....	25,000.00
Charles Stebbins Fairchild.....	30,000.00
Dudley B. Fay Memorial.....	2,000.00
Lawrence Carteret Fenno—Treatment by Light Rays.....	20,000.00
Lawrence Carteret Fenno Free Bed.....	5,000.00
Albert Geiger.....	2,078.89
Franklin H. Hooper Free Bed.....	5,000.00
Amos Lawrence Hopkins Free Bed.....	5,000.00
Charles C. Jackson.....	10,000.00
Maria D. Lockwood Memorial.....	50,728.58
James Ewing Mears.....	9,295.01
George von L. Meyer.....	2,500.00
Elizabeth Worcester Mills.....	203,500.00
Julia M. Moseley.....	23,250.00
Alice C. Moulton.....	2,000.00
Clara Endicott Payson Free Bed.....	5,000.00
Emily J. Proctor.....	3,769.17
Henry O. Underwood.....	10,000.00
Elizabeth L. Walker.....	5,000.00
Gifts for Research in Biophysics.....	828.39
Gifts for Research in Genetics.....	320.00
Gift Franklin W. Moulton for social worker.....	250.54
	<hr/>
	\$636,862.14

This amount is to be compared with the total of \$624,880.30 in last year's report.

The list of subscribers to the Cancer Commission of Harvard University in 1926-1927 is as follows:

GIFTS AND FUNDS FOR CAPITAL

Mrs. Shepherd Brooks.....	\$ 1,000.00
To be added to the Endowment Fund of the Collis P. Huntington Memorial Hospital.	
Charles C. Jackson, Estate of	10,000.00
His bequest, "For the use of the Cancer Com- mission."	
Miss Elizabeth L. Walker, Estate of	5,000.00
Her bequest, "To the Collis P. Huntington Memorial Hospital, for the Cancer Fund."	

GIFTS FOR IMMEDIATE USE

The Cancer Commission of Harvard University

Biophysical Laboratories

George H. Liebel.....	\$1,500.00	
Edward Mallinckrodt, Jr.....	496.00	1,996.00

Present Use

"A Friend".....	1,980.00
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Salaries

Anonymous.....	1,000.00
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Collis P. Huntington Memorial Hospital

Current Expenses:

Mrs. Arthur Adams.....	\$ 10.00
Charles F. Adams.....	100.00
Miss Eleanor Dean Adams.....	10.00
Miss Elizabeth O. Adams.....	25.00
Karl Adams.....	10.00
George R. Agassiz.....	250.00
Rodolphe L. Agassiz.....	25.00
Agoos Family Charity Fund.....	50.00
Solomon Agoos.....	25.00
Mrs. Leonard D. Ahl.....	50.00
Edward B. Alford.....	25.00
C. Frank Allen.....	5.00
Mrs. Charles Almy.....	5.00
Mrs. F. Lothrop Ames.....	50.00
Mrs. James Barr Ames.....	25.00
John S. Ames.....	50.00
Mrs. Harold Amory.....	25.00
Roger Amory.....	25.00
William Amory.....	100.00
Arthur Andrews, In memory of Edward B. Andrews.....	20.00
Henry R. Andrews.....	10.00
Julius Andrews and Mrs. Andrews.....	5.00
Mrs. George M. Angier.....	5.00
Anonymous.....	500.00
Anonymous.....	100.00

Carried forward..... \$1,505.00

<i>Brought forward</i>	\$1,505.00
Anonymous.....	100.00
Anonymous.....	100.00
Anonymous.....	50.00
Anonymous.....	50.00
Anonymous.....	40.00
Anonymous.....	25.00
Anonymous.....	25.00
Anonymous.....	25.00
Anonymous.....	25.00
Anonymous.....	25.00
Anonymous.....	25.00
Anonymous.....	20.00
Anonymous.....	5.00
Anonymous.....	5.00
Mrs. Nathan Anthony.....	10.00
Francis H. Appleton, Jr., and Mrs. Appleton "In Memory of Mary Sargent Apthorp " ...	20.00 200.00
Mrs. Angie B. Armstrong.....	10.00
Edmund K. Arnold.....	15.00
Louis M. Atherton.....	50.00
Mrs. Edwin F. Atkins.....	25.00
Edward W. Atkinson.....	25.00
Mrs. Walter Austin.....	10.00
Charles F. Ayer.....	50.00
A. F. B.....	10.00
Roger W. Babson.....	25.00
John F. Bacon.....	2.00
Louis Baer.....	10.00
Mrs. James A. Bailey.....	25.00
Alfred T. Baker.....	50.00
George B. Baker.....	25.00
Mrs. Horatio L. Baker.....	5.00
Miss Agnes G. Balch.....	10.00
Mrs. Charles H. Baldwin.....	5.00
Mrs. William H. Baltzell.....	100.00
Ira J. Banash.....	10.00
Charles G. Bancroft and Mrs. Bancroft.....	500.00
"In Memory of Dr. George A. Bancroft":	
Mrs. George A. Bancroft.....	100.00
Harold G. Donham and Mrs. Donham..	500.00
Fred B. Rice.....	100.00
Mrs. William M. E. Whitelock.....	100.00
Maurice Yozell.....	10.00
Hugh Bancroft.....	25.00
Mrs. Philip Bard.....	10.00
Joel M. Barnes.....	10.00
Solomon J. Barnet and Mrs. Barnet.....	25.00
Mrs. John W. Bartol.....	10.00
Mrs. Oric Bates.....	50.00
Mrs. Gregory P. Baxter.....	10.00
Edward B. Bayley.....	25.00
Mrs. Walter C. Baylies.....	500.00
Mrs. Thomas P. Beal.....	20.00
George C. Beals.....	25.00
Mrs. Horace L. Bearse.....	10.00
Junius Beebe.....	10.00
Frank B. Bemis.....	50.00
<i>Carried forward</i>	\$4,807.00

<i>Brought forward</i>	\$4,807.00
Harry Berger.....	5.00
David S. Beyer.....	3.00
George Nixon Black.....	100.00
Mrs. Arthur W. Blake.....	100.00
Benjamin S. Blake.....	5.00
Mrs. Francis Blake.....	50.00
J. A. Lowell Blake.....	100.00
Elmer J. Bliss.....	25.00
Mrs. Daniel M. Bonney.....	100.00
Mrs. Herbert L. Bowden.....	25.00
Francis R. Boyd.....	10.00
Albert Boyden.....	20.00
Roland W. Boyden.....	50.00
Walter L. Boyden.....	10.00
Mrs. Frederick T. Bradbury.....	2,000.00
Mrs. Orin G. Bradeen.....	2.00
Mrs. Edward H. Bradford.....	5.00
Mrs. George G. Bradford.....	5.00
Miss Mary G. Bradford.....	2.00
Edward C. Bradlee and Mrs. Bradlee.....	25.00
Frederick W. Bradlee.....	25.00
Henry G. Bradlee and Mrs. Bradlee.....	100.00
Miss Sarah C. Bradlee.....	10.00
Mrs. J. Gardner Bradley.....	25.00
Mrs. Leverett Bradley.....	5.00
Richards M. Bradley.....	20.00
Edward D. Brandegee and Mrs. Brandegee..	1,000.00
Miss Sarah F. Bremer.....	75.00
Theodore G. Bremer and Mrs. Bremer.....	25.00
Miss Fannie R. Brewer.....	25.00
Frank C. Brewer.....	10.00
Miss Florence N. Bridgman.....	50.00
Miss Eleanor Brigham.....	200.00
Gorham Brooks.....	100.00
Davenport Brown.....	25.00
Miss Elizabeth B. Brown.....	55.00
George W. Brown.....	250.00
Mrs. Gus Brown.....	5.00
Brown and Howe.....	100.00
T. Hassall Brown.....	25.00
Mrs. Winthrop Brown, Jr.....	10.00
Mrs. Horace D. Brush.....	10.00
Mrs. Joseph S. Bryant.....	50.00
Miss Ellen T. Bullard.....	50.00
Mrs. Joseph O. Bullard.....	20.00
Mrs. Allston Burr.....	100.00
I. Tucker Burr.....	100.00
Miss Katie Alice Burt.....	25.00
George S. Burton.....	20.00
"C.".....	25.00
Godfrey L. Cabot.....	100.00
Henry B. Cabot.....	100.00
Walter M. Cabot.....	5.00
Caigan Engineering Equipment Company...	10.00
Miss Caroline S. Callender.....	5.00
William Camfill, In memory of his wife, Mary E. Camfill.....	50.00
<i>Carried forward</i>	<hr/> \$10,259.00

<i>Brought forward</i>	\$10,259.00
G. Colket Caner	10.00
Clarence H. Carter	5.00
Richard B. Carter	10.00
Miss Georgina S. Cary	35.00
Miss Louise W. Case	100.00
Edwin W. Cates	25.00
Albert H. Caverly	25.00
Miss Anna Harvey Chace	100.00
Mrs. Henry G. Chamberlain	5.00
Mrs. John B. Chamberlin	50.00
Mrs. Henry B. Chapin	100.00
Alfred E. Chase	25.00
L. C. Chase and Company	1,235.00
Arthur W. Chesterton	10.00
Asaph Churchill	10.00
Miss Alice W. Clark	5.00
Mrs. B. Preston Clark	25.00
Mrs. Frederic S. Clark	50.00
James Clemens	50.00
Mrs. Walter Clothier	25.00
Charles K. Cobb and Mrs. Cobb	25.00
Miss Catherine A. Codman	100.00
Hugh Codman	10.00
Charles N. Cogswell	10.00
Committee of the Permanent Charity Fund Incorporated	1,000.00
Mrs. William O. Comstock	10.00
Charles J. Connick	10.00
Mrs. Costello C. Converse	500.00
Charles A. Coolidge	50.00
Harold J. Coolidge	50.00
Herbert Coolidge	10.00
Mrs. Sidney Coolidge	50.00
Mrs. T. Jefferson Coolidge	250.00
Harry D. Cooper and Company	5.00
Charles E. Cotting	100.00
Miss Elizabeth A. Cotton	200.00
Francis A. Countway	50.00
Mrs. Helen M. Craig	100.00
Miss Muriel Crocker	25.00
Miss Anne C. Crosby	100.00
Mrs. Stephen V. R. Crosby	100.00
Mrs. Francis B. Crowninshield	10.00
Miss Eunice M. Cruft	10.00
Miss Frances C. Cruft	10.00
Miss Margaret Cummings	25.00
Henry V. Cunningham	25.00
Mrs. Henry W. Cunningham	10.00
Charles P. Curtis, Jr., and Mrs. Curtis	10.00
Mrs. Horatio G. Curtis	200.00
Miss Isabella Curtis	20.00
James F. Curtis	20.00
John S. Curtis	50.00
Louis Curtis and Mrs. Curtis	25.00
Louis Curtis, Jr., and Mrs. Curtis	20.00
Miss Margaret Curtis	20.00
Richard C. Curtis and Mrs. Curtis	25.00
<i>Carried forward</i>	\$15,394.00

<i>Brought forward</i>	\$15,394.00
Mrs. Frederic Haines Curtiss	25.00
George M. Cushing and Mrs. Cushing	25.00
Mrs. Tucker Daland	10.00
Henry R. Dalton	25.00
Miss Ada Dana	10.00
Myer Dana and Mrs. Dana	10.00
Richard H. Dana	10.00
Mrs. Ernest B. Dane	100.00
John Dane and Mrs. Dane	10.00
Walter L. Dane	5.00
Albert M. Davis	100.00
Miss Anna L. Davis	5.00
Mrs. Joseph E. Davis	100.00
Mrs. Stephen B. Davol	25.00
Mrs. Frank A. Day	5.00
Charles A. Dean Welfare Trust	50.00
John Dearborn	100.00
Mrs. George L. DeBlois	10.00
Ernest J. Dennen and Mrs. Dennen	10.00
Mrs. Arthur B. Denny	50.00
Miss Emily G. Denny	5.00
Philip Y. DeNormandie	25.00
Thomas S. Derr	25.00
Edward Devlin	20.00
Miss Rose L. Dexter	50.00
Mrs. George P. Dike	10.00
Miss Evelyn Dix	5.00
Robert G. Dodge	25.00
Mrs. Charles F. Dole	15.00
Mrs. Malcolm Donald	100.00
Dennis Driscoll	10.00
Miss Miriam Drury	10.00
Walter W. Duffett and Mrs. Duffett	25.00
E. E.	500.00
Miss Hannah M. Edwards	50.00
Julius Eiseman	10.00
William Ellison	10.00
Mrs. William Emerson	50.00
George G. Emery	50.00
Mrs. Manning Emery	25.00
Mrs. Robert W. Emmons, 2nd	200.00
Frederick E. Emrich	2.00
William Endicott	250.00
Henry C. Everett, Jr., and Mrs. Everett	5.00
Richard M. Everett and Mrs. Everett	10.00
Herbert E. Fales	25.00
Charles A. Falvey	10.00
John W. Farley	10.00
John W. Farlow	25.00
Miss Fannie M. Faulkner	25.00
Mrs. Dudley B. Fay	50.00
Mrs. Henry H. Fay	100.00
S. Prescott Fay	10.00
William H. Fearnside	10.00
Edward N. Fenno	25.00
Frank M. Ferrin and Mrs. Ferrin	10.00
Sewall H. Fessenden	50.00
<i>Carried forward</i>	\$17,916.00

<i>Brought forward</i>	\$17,916.00
Mrs. William F. W. Field.....	10.00
Miss Margaret A. Fish.....	5.00
Mrs. Richard T. Fisher.....	250.00
Mrs. Reginald Heber Fitz.....	25.00
Mrs. W. Scott Fitz.....	25.00
John F. Fitzgerald.....	50.00
Mrs. Elisha Flagg.....	50.00
Mrs. Edward A. Flint.....	5.00
Edward W. Forbes.....	25.00
Mrs. Ralph E. Forbes.....	25.00
Mrs. Waldo E. Forbes.....	50.00
Mrs. Michael J. Ford.....	5.00
Thomas A. Forsyth.....	25.00
Mrs. James O. Foss.....	20.00
Miss Caroline A. Fox.....	25.00
Miss Edith M. Fox.....	25.00
Miss Helen C. Frick.....	100.00
"Friend".....	100.00
"Friend".....	50.00
"A Friend".....	50.00
"From a friend".....	10.00
"From a friend".....	5.00
Mrs. Donald McKay Frost.....	50.00
Mrs. Louis A. Frothingham.....	100.00
Miss Adah G. Fuller.....	25.00
Alvan T. Fuller.....	100.00
Miss Laura Furness.....	5.00
Miss Rebekah T. Furness.....	5.00
Mrs. J. T. G.....	500.00
Mrs. C. B. Gardner.....	5.00
G. Peabody Gardner, Jr., and Mrs. Gardner.....	10.00
William Amory Gardner.....	500.00
Miss Elizabeth M. Garritt.....	50.00
Mrs. E. Peabody Gerry.....	5.00
Mrs. Walter S. Gierasch.....	25.00
Miss Helen C. Gilbert.....	10.00
Gilchrist Company.....	25.00
Miss Ellen A. Gilman.....	5.00
Mrs. George L. Gilmore.....	25.00
James D. Glunts.....	10.00
Samuel Gold.....	5.00
William N. Goodnow.....	25.00
John L. Goss.....	10.00
Franklin P. Gowing.....	10.00
John L. Grandin.....	50.00
Archibald R. Graustein.....	50.00
Morris Gray.....	100.00
Mrs. Reginald Gray.....	100.00
Roland Gray.....	100.00
George C. Greener.....	25.00
Mrs. Charles P. Greenough.....	25.00
Mrs. Henry V. Greenough.....	100.00
Malcolm S. Greenough.....	25.00
Edward W. Grew.....	25.00
Miss Josephine Griffith.....	10.00
Robert E. Gross.....	10.00
Robert H. Gross.....	10.00
<i>Carried forward</i>	\$20,986.00

<i>Brought forward</i>	\$20,986.00
Miss Sarah L. Guild	8.00
Mrs. Magnus R. Haas, In memory of Colonel Abraham U. Loeb	10.00
Frank W. Hallowell	15.00
N. Penrose Hallowell	50.00
Mrs. Charles M. Hammond	10.00
Richard Harte	25.00
Winthrop A. Harvey	100.00
A. Leslie Harwood, Jr.	5.00
Mrs. John H. Harwood	50.00
Frank W. Hastings	10.00
Mrs. Hugh K. Hatfield	25.00
Miss Ellen R. Hathaway	100.00
Horatio Hathaway	25.00
Mrs. M. Graeme Haughton	100.00
Miss Ella M. Hawkrige	25.00
Summit L. Hecht	20.00
Mrs. Augustus Hemenway	50.00
Mrs. William Herman	5.00
Robert F. Herrick	500.00
The Misses Hersey	10.00
Mrs. John Jay Hicks	50.00
Charles Higginson	20.00
Miss Annette S. Hill	25.00
Miss Frances A. Hill	25.00
Edwin A. Hills	10.00
Hyman M. Hillson	10.00
Walter S. Hinchmann	25.00
Mrs. Mabel J. Hinkley	100.00
Franklin W. Hobbs	25.00
Amor Hollingsworth	50.00
Mrs. Edward J. Holmes	10.00
The Misses Holt	100.00
Miss Marian J. Homans	10.00
Robert Homans	25.00
William P. Homans	100.00
Mrs. Arthur N. Hood	25.00
William Hooper	50.00
Mrs. A. Lawrence Hopkins	50.00
Mark M. Horblit	5.00
Henry Hornblower	100.00
Ralph Hornblower	10.00
Mrs. Jesse R. Horne	5.00
Clement S. Houghton	50.00
Miss Elizabeth G. Houghton	100.00
Mrs. Horace M. Houser	25.00
Mrs. Albert A. Howard, In memory of Pro- fessor Albert A. Howard	25.00
Henry S. Howe	100.00
Howes Brothers Company	100.00
Mrs. Charles W. Hubbard	50.00
Mrs. Eliot Hubbard	25.00
Mrs. Henry V. Hubbard, In memory of E. L. K.	20.00
Samuel F. Hubbard	10.00
The Humane Society of the Commonwealth of Massachusetts	1,000.00
<i>Carried forward</i>	\$24,464.00

<i>Brought forward</i>	\$24,464.00
Arnold W. Hunnewell	35.00
Miss Louisa Hunnewell	100.00
Henry S. Hunnewell	500.00
James M. Hunnewell	50.00
Miss Jane B. Hunnewell	20.00
Walter Hunnewell and Mrs. Hunnewell	100.00
Mrs. John Cummings Hunt	10.00
Harry Hunt	50.00
Henry F. Hurlburt, Jr.	10.00
Mrs. Constantine F. Hutchins	5.00
Alfred R. Hutson	50.00
Mrs. Oscar Iasigi	50.00
Mrs. Lawrence Ilfeld	5.00
"In His Name"	5.00
Mrs. Henderson Inches	10.00
Miss Katharine C. Ireson	200.00
Miss Charlotte D. Irish	250.00
Charles Jackson	100.00
Charles Jackson, Jr.	10.00
Delbert L. Jackson	10.00
Henry Jackson	25.00
James Jackson and Mrs. Jackson	25.00
Robert A. Jackson	100.00
Miss Helen L. Jaques	10.00
Bernard Jenney	10.00
Arthur S. Johnson	25.00
Miss Edith Morse Johnson	10.00
Edward C. Johnson	25.00
Laurence H. H. Johnson	5.00
Miss Mildred Johnson	25.00
Mrs. Otis S. Johnson	5.00
Elliott P. Joslin and Mrs. Joslin	10.00
Mrs. Mark R. Jouett, Jr., In memory of F. S. D.	50.00
Albert W. Kaffenburgh	25.00
Walter Kaffenburgh	10.00
John L. Kennedy	50.00
Mrs. Edward L. Kent	10.00
Phillips Ketchum	25.00
Mrs. Henry P. Kidder	25.00
Nathaniel T. Kidder	100.00
Miss Hannah H. Kimball	100.00
L. Cushing Kimball	50.00
Mrs. Thatcher R. Kimball	10.00
Miss Caroline W. King	25.00
Mrs. Henry P. King	200.00
Louis E. Kirstein	50.00
Abraham Koshland	25.00
Jesse Koshland	25.00
Robert J. Koshland	100.00
L. R. L.	10.00
Mrs. William E. Ladd	25.00
Thomas W. Lamont	500.00
Miss M. D. Lane	5.00
Mrs. John Lavalley	5.00
Mrs. Amory A. Lawrence	50.00
Mrs. Edward Lawrence	10.00
<i>Carried forward</i>	\$27,794.00

<i>Brought forward</i>	\$27,794.00
Lawrence Model Lodging Houses	500.00
Walter B. Leach	5.00
George C. Lee and Mrs. Lee	200.00
Joseph Lee	1,000.00
Miss Susan M. Lee	50.00
Amory Leland	100.00
Charles F. Leland and Mrs. Leland	50.00
Dudley R. Leland	100.00
Mrs. Lester Leland	500.00
Russell H. Leonard	50.00
Lever Brothers Company	50.00
Edwin J. Lewis, Jr.	25.00
Mrs. Channing Lilly	25.00
Alexander Lincoln	25.00
Miss Elizabeth Linzee	5.00
Miss Abby Noyes Little	5.00
Mrs. Arthur D. Little	10.00
Mrs. David M. Little	100.00
Mrs. Percival H. Lombard	50.00
Miss Alice M. Longfellow	50.00
Augustus P. Loring	25.00
Augustus P. Loring, Jr.	10.00
Mrs. Lindsley Loring	5.00
William Caleb Loring	10.00
Mrs. Thornton E. Lothrop	50.00
William H. Lothrop	5.00
Mrs. William Sturgis H. Lothrop	25.00
Jacob Lourie	5.00
"In memory of John Lowell, Jr."	50.00
Ralph Lowell	25.00
Stephen B. Luce	25.00
Lundell Charitable Trust, William W. Vaughan, Trustee	15.00
Mrs. Herbert Lyman	20.00
Jesse P. Lyman	25.00
Miss Mabel Lyman	100.00
Theodore Lyman	100.00
M. Lester Madden	25.00
Edward Mallinckrodt, Jr.	500.00
S. G. Mandalian and Mrs. Mandalian	25.00
Mrs. George S. Mandell	25.00
Jacob M. Mann	10.00
Samuel Markell	5.00
Austin B. Mason	10.00
Mrs. Charles E. Mason	100.00
Miss Fanny P. Mason	25.00
Miss Ida M. Mason	50.00
Massachusetts Lime and Cement Company ..	5.00
Frank W. Massell	5.00
Miss Margaret Matthews	1.00
Marcus B. May	10.00
Maynard Women's Club	11.80
Mrs. William H. McElwain	200.00
Walter J. Meadows	25.00
Mrs. C. H. Sayre Merrill	15.00
Miss Emma L. Merrill	5.00
Mrs. Daniel Merriman	25.00
<i>Carried forward</i>	\$32,266.80

<i>Brought forward</i>	\$32,266.80
Arthur Michael	5.00
Mrs. Walter E. Miller	10.00
Arthur W. Milliken	100.00
The Milton Woman's Club	15.00
Mrs. George R. Minot	15.00
James J. Minot	50.00
George W. Mitton	100.00
Charles G. Mixter and Mrs. Mixter	25.00
William J. Mixter	5.00
John Moir and Mrs. Moir	100.00
Frederic E. Moore	10.00
Arthur W. Moors	25.00
Moors and Cabot	50.00
Francis Moors, Jr.	10.00
J. Pierpont Morgan	100.00
Henry I. Morrison	5.00
Alan R. Morse	5.00
Miss Frances R. Morse	25.00
Mrs. E. Preble Motley	100.00
Mrs. J. Lothrop Motley	25.00
Mrs. Thomas Motley	25.00
William A. Muller	25.00
L. E. Muran Company	5.00
Mrs. Edward W. Nash	5.00
Mrs. Frank King Nash	10.00
Louis W. Nash	10.00
Mrs. Nathaniel C. Nash	10.00
Jacob Nathan	5.00
Hugh Nawn	25.00
T. Jefferson Newbold	25.00
Miss Gertrude Newhall	3.00
Mrs. Lucian Newhall	100.00
Mrs. Samuel J. Newman	10.00
Louville V. Niles	5.00
Solomon Nisson	5.00
Grenville H. Norcross	50.00
Mrs. Frederic O. North	5.00
Miss Annie Endicott Nourse	10.00
James Nowell	50.00
George R. Nutter	10.00
Charles E. Ober	25.00
Robert L. O'Brien	25.00
Patrick A. O'Connell	25.00
William H. O'Connell	10.00
Miss Carolyn Olmsted	20.00
Harry Oppenheim	15.00
Mrs. John A. Ordway	50.00
Mrs. John B. Osborn	5.00
Robert T. Paine	25.00
Miss Anna C. Palmer	5.00
Arthur H. Parker	25.00
Augustin H. Parker	10.00
Miss Eleanor S. Parker	10.00
George A. Patten	20.00
Mrs. Richard F. Paul	50.00
"In memory of Lillian Payn-Sills"	10.00
Charles G. Payson	10.00

Carried forward

\$33,779.80

<i>Brought forward</i>	\$33,779.80
Miss Amelia Peabody	50.00
Endicott Peabody	25.00
Mrs. Endicott Peabody	25.00
George A. Peabody	500.00
Harold Peabody, In memory of John E. Peabody	50.00
Mrs. John E. Peabody	20.00
Mrs. W. Rodman Peabody	10.00
Mrs. Leopold Peavy	5.00
Silas Peavy	5.00
J. Gilbert Peirce	5.00
Miss Annie S. Penfield	5.00
Thomas N. Perkins	25.00
Arthur Perry and Mrs. Perry	25.00
William G. Perry	5.00
William York Peters	25.00
Franklin T. Pfaelzer	10.00
James J. Phelan and Mrs. Phelan	50.00
Mrs. George Philler	25.00
Walter P. Phillips	5.00
Dudley L. Pickman	200.00
Dudley L. Pickman, Jr.	25.00
Arthur S. Pier	5.00
Harold W. Pierce	25.00
Alex S. Porter	5.00
Mrs. Henry K. Porter	10.00
John R. Post	10.00
Mrs. John Briggs Potter	10.00
Mrs. George H. Powers	25.00
Mrs. Charles A. Proctor	25.00
Miss Emily Dutton Proctor	1,000.00
Mrs. John Leonard Proctor	5,000.00
Joseph O. Proctor, Jr., and Mrs. Proctor	25.00
Mrs. James J. Putnam	5.00
Felix Rackemann and Mrs. Rackemann	50.00
Francis M. Rackemann and Mrs. Rackemann	100.00
Harry S. Rand and Mrs. Rand	10.00
Miss Helen M. Ranney	10.00
Max Raphael	10.00
A. C. Ratshesky Charity Foundation	100.00
Israel A. Ratshesky and Mrs. Ratshesky. . . .	10.00
Miss Helen S. Reed	5.00
Mrs. John H. Reed	5.00
William Howell Reed	25.00
Mrs. Frank W. Remick	100.00
Harrison G. Reynolds	50.00
Mrs. George L. Richards	100.00
Charles O. Richardson	25.00
Mrs. John Richardson	10.00
Mrs. John Richardson, Jr.	50.00
The Misses Richardson	1.00
William L. Richardson	200.00
Arthur Wallace Rice	25.00
William T. Rich	25.00
Joshua B. Richmond	25.00
Mrs. Joshua B. Richmond	25.00
Charles E. Riley	200.00
<i>Carried forward</i>	\$42,180.80

<i>Brought forward</i>	\$42,180.80
Mrs. Charles E. Riley	100.00
Mrs. William H. Robey	25.00
Miss Jeannie D. Robinson	5.00
C. P. Rockwell	50.00
Charles A. Rome	2.00
Joseph L. Rome	3.00
Louis Rosenthal	25.00
Louis Rosoff	10.00
Mrs. Waldo O. Ross	10.00
Bernard J. Rothwell	25.00
James Mason Rothwell	10.00
Joseph Rudnick	5.00
Charles T. Russell and Mrs. Russell	25.00
Miss Dora Walton Russell	5.00
Arthur J. Rutledge	5.00
Paul J. Sachs	10.00
John L. Saltonstall	100.00
Mrs. Philip L. Saltonstall	25.00
Robert Saltonstall	100.00
Miss Lucy S. Sampson	7.00
Mrs. Charles R. Sanger	10.00
Mrs. George P. Sanger	25.00
Sabin P. Sanger	50.00
Mrs. Francis W. Sargent	125.00
Henry B. Sawyer and Mrs. Sawyer	25.00
Mrs. Walter D. Sawyer	25.00
Robert W. Sayles and Mrs. Sayles	25.00
Benjamin Schellenberg	2.00
Miss Emma E. Schirmer	10.00
Mrs. Arthur P. Schmidt	10.00
W. E. Schrafft	50.00
Miss Annie L. Sears	50.00
Miss Edith Howland Sears	5.00
Miss Evelyn G. Sears	50.00
Herbert M. Sears	100.00
Mrs. J. Montgomery Sears	100.00
Mrs. Knyvet W. Sears	200.00
Miss Mary P. Sears	50.00
Richard D. Sears	100.00
Ellery Sedgwick	100.00
Thomas H. Shepard	25.00
John F. Sherman	20.00
Harry B. Shuman and Mrs. Shuman	25.00
Mrs. Eli Siegel	5.00
Mrs. George S. Silsbee	100.00
Gifford K. Simonds	100.00
Max Singer and Mrs. Singer	5.00
Samuel A. Singer	10.00
Stanley H. Sinton and Mrs. Sinton	25.00
Isaac M. Slocum	3.00
"The Misses A. D. and S. E. Smith"	5.00
"A. D. and A. D."	10.00
Arthur Thad Smith	10.00
J. Newton Smith	10.00
Mrs. H. Monmouth Smith	10.00
Southbridge Woman's Club	10.00
Eliot Spalding	10.00
<i>Carried forward</i>	\$44,222.80

<i>Brought forward</i>	\$44,222.80
John T. Spaulding	100.00
William S. Spaulding	100.00
Abraham P. Spitz	10.00
Chester C. Spring	10.00
Mrs. Pierpont L. Stackpole	25.00
The Stanwood-Hillson Corporation	3.00
Charles H. Stearns	10.00
F. R. Carnegie Steele	15.00
Mrs. Alexander Steinert	10.00
Abbot Stevens	25.00
Moses T. Stevens	25.00
Cecil Stewart	10.00
James A. Stillman	100.00
Malcolm B. Stone	10.00
Mrs. Robert G. Stone	50.00
Miss Emily L. Storer	10.00
Charles E. Stratton	10.00
Aaron L. Strauss	10.00
Mrs. Edward C. Streeter	10.00
Miss Evelyn R. Sturgis	25.00
Henry N. Sweet	10.00
Mrs. Frederick Swift	25.00
George H. Swift and Mrs. Swift	50.00
Miss Lucy W. Swift	2.00
Mrs. Thomas Russell Sullivan	5.00
L. T.	2.00
Miss Alice P. Tapley	500.00
Henry F. Tapley	25.00
Robert M. Tappan and Mrs. Tappan, "In Memory of M. H. F."	20.00
Mrs. Stephen L. Taylor	25.00
Louis B. Thacher	10.00
Thomas C. Thacher	10.00
Mrs. Ezra Ripley Thayer	10.00
John E. Thayer	100.00
Mrs. Nathaniel Thayer	100.00
Albert W. Thompson	10.00
Elihu Thomson	25.00
Mrs. Augustus Thorndike	10.00
Miss Alice A. Thorp	10.00
Miss Annie Thorp	20.00
Joseph G. Thorp	100.00
Mrs. John B. Tileston	10.00
Mrs. Arthur R. Tirrell	25.00
"The Eugene Tompkins Memorial"	1,000.00
Charles H. Traiser	50.00
The Charles Irwin Travelli Fund	200.00
Mrs. Bayard Tuckerman	100.00
Mrs. John F. Tyler	100.00
Miss Mabel W. Underwood	5.00
Miss Mary R. Underwood	5.00
Miss Sophia A. Underwood	5.00
Miss Susan Upham	20.00
Mrs. Henry G. Vaughan	25.00
Mrs. Herman F. Vickery	5.00
Miss Margaret Vickery	10.00
Miss Eva von Blomberg	5.00
<i>Carried forward</i>	\$47,424.80

<i>Brought forward</i>	\$47,424.80
Leighton Voorhees	8.00
F. Frank Vorenberg	10.00
Felix Vorenberg	50.00
Fred Vorenberg	25.00
Mrs. George A. Vose	10.00
Mrs. Alexander F. Wadsworth	15.00
Eliot Wadsworth	100.00
Charles Walcott and Mrs. Walcott	25.00
William Q. Wales	10.00
Charles C. Walker	50.00
Mrs. Frances K. Wallburg	100.00
Henry E. Warner	50.00
Mrs. Bayard Warren	100.00
Clifford P. Warren	10.00
J. Collins Warren	250.00
Mrs. Nettie L. Waterhouse	5.00
Simon Waters	5.00
Mrs. Thomas A. Watson	10.00
Mrs. Thomas R. Watson	10.00
Mrs. Andrew G. Webster, In memory of her son, Dr. Harrison B. Webster	50.00
Frank G. Webster and Mrs. Webster	200.00
Alonzo P. Weeks	10.00
Sinclair Weeks	25.00
Warren B. P. Weeks	25.00
Mrs. C. Minot Weld	25.00
Albert B. Wells	100.00
Mrs. Barrett Wendell	10.00
M. Rogers Wendell	25.00
Miss Martha Wetherbee	5.00
William P. Wharton	100.00
Mrs. Berkeley Wheeler	20.00
Miss Helen Wheeler	25.00
Mrs. Howard Whitcomb	25.00
Miss Gertrude R. White	25.00
Miss Harriet R. White	10.00
Mrs. Harry K. White	25.00
Mrs. Moses P. White	100.00
Alexander Whiteside	10.00
Edmund A. Whitman	25.00
Mrs. William Whitman, Jr.	100.00
Edward F. Whitney	200.00
Mrs. Ellerton P. Whitney	10.00
Homer F. Whittemore	25.00
William R. Whittemore	5.00
George Wigglesworth	50.00
Samuel F. Wilkins	5.00
John D. Williams	100.00
Moses Williams	25.00
In memory of William Power Wilson	1,000.00
Charles N. Winship	50.00
Mrs. Alfred Winsor	10.00
Mrs. Frederick Winsor	25.00
Robert Winsor, Jr.	20.00
Mrs. Roger Wolcott	25.00
George A. Wood	5.00
Orrin G. Wood	50.00
<i>Carried forward</i>	\$50,812.80

<i>Brought forward</i>	\$50,812.80	
Henry D. Woods.....	500.00	
Charles E. Worrick.....	50.00	
Miss Beatrice Wright.....	5.00	
Wyman-Allen Lumber Company.....	10.00	
Arthur R. Wyzanski.....	10.00	
Mrs. Benjamin L. Young.....	10.00	
	<hr/>	\$51,397.80
J. J. Tillinghast.....		10.00
Credit with Purchasing Bureau		
Grant from the Medical School for work in the Laboratory of the Cancer Commission, Flat- tery Research Fund.....		750.00

The balance sheet for June 30, 1927, is as follows:

EXHIBIT B			
<i>Assets</i>		<i>Liabilities</i>	
Cash.....	\$15.00	Accounts Payable.....	\$1,070.27
Accounts Receivable		Reserve for Doubtful Ac-	
Current... \$8,117.73		counts.....	21,059.00
Suspended 21,059.00	29,176.73	Funds and Gifts (Exhibit	
		A).....	636,862.14
Inventories:		Advances made by Uni-	
Food..... \$523.88		versity.....	8,844.19
Medical and			
Surgical			
Supplies.. 1,029.85	1,553.73		
Prepaid Expenses.....	228.00		
Investments in the hands of			
Treasurer of Harvard			
College.....	636,862.14		
	<hr/>		<hr/>
	\$667,835.60		\$667,835.60
	<hr/>		<hr/>

The statement of income and expense for the year ended June 30, 1927, as supplied by the Bursar's Office of Harvard University, is as follows:

EXHIBIT C

Expenses

Hospital Departments:

Salaries.....	\$13,487.50
Social Service.....	50.67
Administration.....	18,087.12
Care of Patients.....	22,226.81
Housekeeping.....	9,605.30
Kitchen and Dining Room.....	4,162.65
Laundry.....	3,560.72
Photography.....	156.50
Steward's Department.....	11,165.76
General House and Property.....	15,713.35
State Diagnosis.....	2,334.06
Rent of rooms outside Hospital, for nurses.....	1,471.88
Free Service to Patients.....	1,752.00
Reserve for Doubtful Accounts...	4,842.94
Uncollected Accounts Charged Off	895.50

\$109,512.76

Research Laboratories:

Salaries.....	18,225.00
Biophysics.....	10,739.08
Chemical.....	82.27
Medical.....	5,168.28
Pathological.....	490.48
Radium Plant.....	2,216.24
Rous Sarcoma.....	182.10
Short Wave Therapy.....	3,450.03
X-ray Diagnosis.....	2,044.71

42,598.19

Total Expenses for year.....	\$152,110.95
Restricted Income not used and added to Funds.....	196.51

\$152,307.46

Income

Received from Patients:

Board and Care:	
Ward Patients.....	\$14,412.23
Private Room Patients.....	5,775.42
Out-Patients: Fees and Dressings.....	6,084.25
Radium Treatments.....	11,885.50
Operations.....	6,058.00
Special Nursing.....	859.00
Board of Special Nurses.....	247.50
X-ray Treatments.....	6,926.75
X-ray Diagnosis.....	1,165.00

\$53,413.65

3,000.00

196.32

37.00

Commonwealth of Massachusetts.....	
Discounts Earned.....	
Sundries.....	
Income from Funds:	
Unrestricted.....	32,994.46
Restricted	

45

L. C. Fenno (Short Wave Therapy) .	1,100.00
Flattery Research (Salaries).....	750.00
Emily J. Proctor.....	196.51

35,040.97

Gifts:

For General Purposes.....	51,397.80
For Special Purposes:	
Salaries.....	1,000.00
Wages Technician.....	1,980.00
Research in Biophysics.....	2,027.05

56,404.85

Total Income for year.....	\$148,092.79
Withdrawn from balances of Gifts of former years.....	222.28
Deficit for year.....	3,992.39

\$152,307.46

Respectfully submitted,

CHARLES JACKSON,
Treasurer.

July 1, 1927.

LIST OF COMMUNICATIONS

CANCER COMMISSION OF HARVARD UNIVERSITY

1. Statistics of Cancer — W. F. Whitney.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, p. 33.
October 23, 1900.
2. On the Etiology of Cancer — E. H. Nichols.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 34-58.
October 23, 1900.
3. Report of the Presence of "Plimmer's Bodies" in Carcinomatous Tissue
— R. B. Greenough.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 59-62.
October 23, 1900.
4. Tumors and Sporozoa of Fishes — E. E. Tyzzer.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 63-68.
October 23, 1900.
5. The Reconstruction of a Nodule of Cancer — E. A. Locke.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 69-71.
October 23, 1900.
6. Report of Culture Experiments made with Carcinomatous Tissue, 1889-
1900 — Oscar Richardson.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 72-80.
October 23, 1900.
7. Coccidium Infection of the Rabbit's Liver — E. E. Tyzzer.
Journal of Medical Research, Vol. 7, No. 3, pp. 235-254. April, 1902.
8. Molluscum Contagiosum — Charles J. White and W. H. Robey, Jr.
Journal of Medical Research, Vol. 7, No. 3, pp. 255-277. April, 1902.
9. Culture Experiments with Malignant Tumors — Oscar Richardson.
Journal of Medical Research, Vol. 7, No. 3, pp. 278-279. April, 1902.
10. Four Pathogenic *Torulæ* (Blastomycetes) — Joseph D. Weis.
Journal of Medical Research, Vol. 7, No. 3, pp. 280-311. April, 1902.
11. The Relation of Blastomycetes to Cancer — E. H. Nichols.
Journal of Medical Research, Vol. 7, No. 3, pp. 312-359. April, 1902.
12. Cell Inclusions in Cancer and in Non-cancerous Tissue — R. B. Greenough.
Journal of Medical Research, Vol. 7, No. 3, pp. 360-380. April, 1902.
13. A Contribution to the Classification of Tumors — F. B. Mallory.
Journal of Medical Research, Vol. 13, No. 2, pp. 113-136. January,
1905.
14. On the Nature of the Cell Inclusions of Cancer — R. B. Greenough.
Journal of Medical Research, Vol. 13, No. 2, pp. 137-166. January,
1905.
15. The Effects of the Roentgen Ray upon Cancer — Robert H. Vose and
Walter C. Howe.
Journal of Medical Research, Vol. 13, No. 2, pp. 167-185. January,
1905.
16. Implantation of Tissue and Its Relation to Cancer — E. H. Nichols.
Journal of Medical Research, Vol. 13, No. 2, pp. 187-232. January,
1905.
17. The Inoculable Tumors in Mice — E. E. Tyzzer.
Journal of Medical Research, Vol. 17, No. 2, pp. 137-153. November,
1907.
18. A Series of Twenty Spontaneous Tumors in Mice, with the Accompanying
Pathological Changes and the Results of the Inoculation of Certain
of These Tumors into Normal Mice — E. E. Tyzzer.
Journal of Medical Research, Vol. 17, No. 2, pp. 155-157. November,
1907.

19. A Study of Heredity in Relation to the Development of Tumors in Mice — E. E. Tyzzer.
Journal of Medical Research, Vol. 17, No. 2, pp. 199-211. November, 1907.
20. A Transmissible Cancer of the Rat Considered from the Standpoint of Immunity — F. P. Gay.
Journal of Medical Research, Vol. 20, No. 1, pp. 175-201. January, 1909.
21. The Lesions of the Skin and the Tumor Formations in Xeroderma Pigmentosum — W. T. Councilman and G. B. Magrath.
Journal of Medical Research, Vol. 21, No. 3, pp. 331-355. October, 1909.
22. The Surgical Treatment of X-ray Carcinoma and Other Severe X-ray Lesions Based upon an Analysis of Forty-Seven Cases — C. A. Porter.
Journal of Medical Research, Vol. 21, No. 3, pp. 357-413. October, 1909.
23. The Pathological Histology of Chronic X-ray Dermatitis and Early X-ray Carcinoma — S. B. Wolbach.
Journal of Medical Research, Vol. 21, No. 3, pp. 415-449. October, 1909.
24. Chronic Pancreatitis with Tumor-like Nodules in the Cat — Thomas Ordway.
Journal of Medical Research, Vol. 21, No. 3, pp. 451-458. October, 1909.
25. Tumors in the Common Fowl — E. E. Tyzzer and Thomas Ordway.
Journal of Medical Research, Vol. 21, No. 3, pp. 459-477. October, 1909.
26. A Series of Spontaneous Tumors in Mice with Observations on the Influence of Heredity on the Frequency of Their Occurrence — E. E. Tyzzer.
Journal of Medical Research, Vol. 21, No. 3, pp. 479-518. October, 1909.
27. A Study of Inheritance in Mice with Reference to Their Susceptibility to Transplantable Tumors — E. E. Tyzzer.
Journal of Medical Research, Vol. 21, No. 3, pp. 519-573. October, 1909.
28. The Nature of the Reaction of the Tissues of Susceptible and Non-Susceptible Mice to an Inoculable Tumor — A. M. Burgess.
Journal of Medical Research, Vol. 21, No. 3, pp. 575-590. October, 1909.
29. The Effect of Trypsin on Cancer and on the Germ Cells in Mice — Stephen Rushmore.
Journal of Medical Research, Vol. 21, No. 3, pp. 591-596. October, 1909.
30. The Treatment of Cancer with Body Fluids and Cancerous Ascitic Fluid — E. H. Risley.
Journal of the American Medical Association, Vol. 56, pp. 1383-1389. May 13, 1911.
31. The Hemolytic Skin Reactions in Carcinoma — E. H. Risley.
The Boston Medical and Surgical Journal, Vol. 165, No. 4, pp. 127-128. July 27, 1911.
32. The Gilman-Coca Vaccine Emulsion Treatment of Cancer — E. H. Risley.
The Boston Medical and Surgical Journal, Vol. 165, No. 21, pp. 784-788. November 23, 1911.
33. The Huntington Hospital and the Scope of Its Work — E. E. Tyzzer and Thomas Ordway.
Boston Medical & Surgical Journal, Vol. 166 No. 2, pp. 887-889. June 13, 1912.

34. Tumor Investigation — A General View of Various Lines of Activity — E. E. Tyzzer.
Harvard Graduates' Magazine, Vol. 21, No. 82. December, 1912.
35. The Collis P. Huntington Hospital for Cancer Research — Robert B. Greenough and Thomas Ordway.
Harvard Graduates' Magazine, Vol. 21, No. 82. December, 1912.
36. Factors in the Production and Growth of Tumor Metastases — E. E. Tyzzer.
Journal of Medical Research, Vol. 28, No. 2, pp. 309-332. July, 1913.
37. The Complement Content of the Blood in Malignant Disease — Thomas Ordway and Ellis Kellert.
Journal of Medical Research, Vol. 28, pp. 287-299. July, 1913.
38. The Protein Metabolism in Certain Tumor-bearing Rats — Thomas Ordway and J. Lucien Morris.
Journal of Medical Research, Vol. 28, No. 2, pp. 301-308. July, 1913.
39. The Use of Radium in Cancer and Allied Conditions at the Huntington Hospital — Illustrative Cases. A report of the Cancer Commission of Harvard University, presented by Thomas Ordway.
Boston Medical and Surgical Journal, Vol. 171, No. 21, pp. 771-781. November 19, 1924.
40. Carcinoma, Syphilis, and Tuberculosis Co-existent in the Same Patient, with Report of a Case — Ellis Kellert.
Journal of the American Medical Association, 1914, Vol. 63, p. 1819.
41. The Importance of Inflammation in the Immunity of Mice to Implanted Tumor — E. E. Tyzzer.
Journal of Medical Research, Vol. 32, pp. 201-223. May, 1915.
42. Radioactive Substances in the Treatment of Cancer — William Duane.
Harvard Graduates' Magazine, June, 1915. (No reprints.)
43. The Tumors of the Japanese Waltzing Mouse and of Its Hybrids — E. E. Tyzzer.
Journal of Medical Research, Vol. 32, pp. 331-360. July, 1915.
44. On the Extraction and Purification of Radium Emanation — William Duane.
Physical Review, N. S., Vol. 5, pp. 311-326. April, 1915.
45. Cancer Research. Problems and Methods of Investigation — E. E. Tyzzer.
St. Paul Medical Journal, Vol. 17, pp. 481-487. July, 1915.
46. A Direct Reading Potentiometer for Measuring and Recording both the Actual and the Total Reaction of Solutions — W. T. Bovie.
Journal of Medical Research, Vol. 33, pp. 295-322. November, 1915.
47. Further Experimental Studies on the Inheritance of Susceptibility to a Transplantable Tumor, Carcinoma (J. w. A.) of the Japanese Waltzing Mouse — C. C. Little and E. E. Tyzzer.
Journal of Medical Research, Vol. 33, pp. 393-453. January, 1916.
48. On X-ray Wave-Lengths — William Duane and Franklin L. Hunt.
Physical Review, August, 1915.
49. Tumor Immunity — E. E. Tyzzer.
Journal of Cancer Research, Vol. 1, No. 2, April, 1916, pp. 125-155.
50. Planck's Radiation Formula deduced from Hypotheses suggested by X-ray Phenomena — William Duane.
Physical Review, N. S., Vol. 7, No. 1, p. 143. January, 1916.
51. An Active Modification of Hydrogen Produced by Alpha Rays — William Duane and Gerald Wendt.
Abstract in Physical Review, N. S., Vol. 7, No. 6. June, 1916.
52. The Action of Light on Protoplasm — W. T. Bovie.
American Journal of Tropical Diseases and Preventive Medicine, Vol. 2, No. 8, February, 1915, pp. 506-517.
53. The Biological Effects of Radium Rays — W. T. Bovie.
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54. Studies on the Inheritance of Susceptibility to a Transplantable Sarcoma (J. w. B.) of the Japanese Waltzing Mouse — E. E. Tyzzer and C. C. Little.
Journal of Cancer Research, Vol. 1, No. 3, p. 387.
55. A Rapid Method for Determining Calcium in Blood and Milk — Henry Lyman.
Journal of Biological Chemistry, Vol. 29, No. 2, p. 169. March, 1917.
56. A Reactive Modification of Hydrogen Produced by Alpha Radiation — William Duane and Gerald L. Wendt.
Physical Review, August, 1917.
57. Value of the Constant h Determined by Means of X-rays — F. C. Blake and William Duane.
Physical Review, December, 1917.
58. High-Frequency Absorption Spectra of the Chemical Element — F. C. Blake and William Duane.
Physical Review, December, 1917.
59. Radium in the Treatment of Cancer — William Duane.
Proceedings of the Second Pan-American Scientific Congress, Vol. 10, p. 503.
60. Report of Results of Radium Treatment at the Collis P. Huntington Memorial Hospital, by the Cancer Commission of Harvard University — William Duane and Robert B. Greenough.
Boston Medical and Surgical Journal, September 13, 1917, Vol. 177, No. 11, pp. 359-365.
61. Methods of Preparing and Using Radioactive Substances in the Treatment of Malignant Disease, and of Estimating Suitable Dosages — William Duane.
Boston Medical and Surgical Journal, December 6, 1917, Vol. 177, No. 23, pp. 787-799.
62. Hodgkin's Disease: A Report on the Cases Observed at the Collis P. Huntington Memorial Hospital, from April, 1913, to July, 1916, with Special Reference to Treatment with Radium and X-ray — Channing C. Simmons and George Benet.
Boston Medical and Surgical Journal, December 13, 1917, Vol. 177, No. 24, pp. 819-834.
63. Report on the Treatment of Myelogenous Leukemia with Radium — Francis W. Peabody.
Boston Medical and Surgical Journal, December 20, 1917, Vol. 177, No. 25, pp. 873, 874.
64. Report of Treatment of Carcinoma of Cervix at the Huntington Hospital for Period of Four Years — Edward H. Risley and George A. Leland, Jr.
Boston Medical and Surgical Journal, December 27, 1917, Vol. 177, No. 26, pp. 891-894.
65. Sterilization of Surgeon's Knives and Scissors by Heating in Liquid Petrolatum — Henry Lyman.
The Journal of the American Medical Association, June 23, 1917, Vol. 68, 1907, 1908.
66. Radium in the Treatment of Carcinoma of the Buccal Cavity — Robert B. Greenough.
Boston Medical and Surgical Journal, May 2, 1918, Vol. 178, pp. 598-602.
67. Delay in the Surgical Treatment of Cancer — Channing C. Simmons.
Boston Medical and Surgical Journal, November 21, 1918, Vol. 179, pp. 639-641.
68. Abstract — The Relation Between the K X-ray Series and the Atomic Numbers of the Chemical Element — William Duane and Kang-Fu Hu.
69. Abstract — The Critical Absorption and Characteristic Emission X-ray Frequencies — William Duane and Kang-Fu Hu.
Physical Review, June, 1918.

70. Abstract — The Relation Between the General X-radiation and the Atomic Number of the Target — William Duane.
Physical Review, June, 1918.
71. Sensitization to Heat Due to Exposure to Light of Short Wave-Lengths — W. T. Bovie and Alice Klein.
Journal of General Physiology, Vol. 1, No. 3, pp. 331-336. January, 1919.
72. Rate of Recovery from Action of Fluorite Rays — W. T. Bovie and D. M. Hughes.
Journal of General Physiology, Vol. 1, No. 3, pp. 323-329. January, 1919.
73. The Physiological Action of Radiation — W. T. Bovie.
Journal of Medical Research, Vol. 39, pp. 271-277. November, 1918.
74. The Approximation of the Values of the Absorption Index of Fluorite Rays in Protoplasm — W. T. Bovie.
Journal of Medical Research, Vol. 39, pp. 239-249. November, 1918.
75. The Location of the Physiological Effects of Radiation within the Cell — W. T. Bovie.
Journal of Medical Research, Vol. 39, pp. 251-265. November, 1918.
76. The Effects of Fluorite Ultra-Violet on the Rate of Division of Paramecium Caudatum — W. T. Bovie and D. M. Hughes.
Journal of Medical Research, Vol. 39, pp. 233-238. November, 1918.
77. The Effects of Quartz Ultra-Violet on the Rate of Division of Paramecium Caudatum — W. T. Bovie and D. M. Hughes.
Journal of Medical Research, Vol. 39, pp. 223-231. November, 1918.
78. On the Critical Absorption Frequencies of the Chemical Elements of High Atomic Numbers — William Duane and Takeo Shimizu.
Physical Review, Vol. 13, p. 159. February, 1919.
79. Are the Frequencies in the K Series of X-rays the Highest Frequencies as Characteristic of a Chemical Element — William Duane and Takeo Shimizu.
Physical Review, Vol. 13, p. 289. April, 1919.
80. On the Relation between the K Series and L Series of X-rays — William Duane and Takeo Shimizu. (Abstract of No. 82.)
Physical Review, Vol. 13, p. 306. April, 1919.
81. Chordoma — E. M. Daland, M.D.
Boston Medical and Surgical Journal, Vol. 180, p. 591. May, 1919.
82. On the X-ray Absorption Wave-Lengths of Lead Isotopes — William Duane and Takeo Shimizu.
Proceedings of the National Academy of Sciences, Vol. 5, p. 198. June, 1919.
83. On the Relation between the K Series and L Series of X-rays — William Duane and Takeo Shimizu.
Physical Review, Vol. 14, p. 67. July, 1919.
84. What We Know about Cancer — R. B. Greenough, M.D., James Ewing, M.D., and J. M. Wainwright, M.D.
Bulletin No. 14, American Society for the Control of Cancer, July, 1919.
85. On the Critical Absorption and Characteristic Emission X-ray Frequencies — William Duane and Kang-Fu Hu.
Physical Review, Vol. 14, p. 369. November, 1919.
86. On the Spectrum of X-rays from an Aluminum Target — William Duane and Takeo Shimizu.
Physical Review, Vol. 14, p. 389. November, 1919.
87. On the Relation Between the Intensity of the General X-radiation and the Atomic Number of the Anticathode — William Duane and Takeo Shimizu.
Physical Review, Vol. 14, p. 525. December, 1919.
88. On the X-ray Absorption Frequencies Characteristic of the Chemical Elements — William Duane and Kang-Fu Hu.
Physical Review, Vol. 14, p. 516. December, 1919.

89. On the X-ray Absorption Frequencies Characteristic of the Chemical Elements — William Duane and Takeo Shimizu.
Physical Review, Vol. 14, p. 522. December, 1919.
90. The Treatment of Tumors by X-ray and Radium — Robert B. Greenough.
Boston Medical and Surgical Journal, June 16, 1921, Vol. 184, pp. 622-627.
91. Cancer: Factors Entering into the Delay in Its Surgical Treatment — Channing C. Simmons and Ernest M. Daland.
Boston Medical and Surgical Journal, September 2, 1920, Vol. 183, pp. 298-303.
92. On the K Series of X-rays — William Duane and Wilhelm Stenstrom.
Proceedings of the National Academy of Sciences, August, 1920, Vol. 6, pp. 477-486.
93. Characteristic Absorption of X-rays: L Series — William Duane and R. A. Patterson.
Proceedings of the National Academy of Science, September, 1920, Vol. 6, pp. 509-518.
94. On the Relative Positions and Intensities of Lines in X-ray Spectra — William Duane and R. A. Patterson.
Proceedings of the National Academy of Science, September, 1920, Vol. 6, pp. 518-527.
95. The Combined Operative and Radium Treatment of Malignant Disease of the Nasal Accessory Sinuses — Harry A. Barnes.
Boston Medical and Surgical Journal, December 2, 1920, Vol. 183, pp. 648-656.
96. Concerning the Nature of "Protozoan-Like" Cells in Certain Lesions of Infancy — Ernest W. Goodpasture and Fritz B. Talbot.
American Journal of Diseases of Children, May, 1921, Vol. 21, pp. 415-425.
97. The A B C of Radium — Ernest M. Daland.
Boston Medical and Surgical Journal, June 30, 1921, Vol. 184, pp. 696-702.
98. The Etiology of Acute Inflammations of the Nose, Pharynx and Tonsils — Stuart Mudd, Samuel B. Grant and Alfred Goldman.
Annals of Otology, Rhinology and Laryngology, March, 1921, Vol. 30, pp. 1-73.
99. Reactions of the Nasal Cavity and Postnasal Space to Chilling of the Body Surface. 1. Vasomotor Reactions — Stuart Mudd, Alfred Goldman and Samuel B. Grant.
The Journal of Experimental Medicine, 1921, Vol. 34, p. 11.
100. Reactions of the Nasal Cavity and Postnasal Space to Chilling of the Body Surface. 2. Concurrent Study of Bacteriology of Nose and Throat — Alfred Goldman, Stuart Mudd and Samuel B. Grant.
The Journal of Infectious Diseases, 1921, Vol. 29, p. 151.
101. On the X-ray Spectra of Tungsten — William Duane and R. A. Patterson.
Physical Review, 1920, Vol. 16, p. 526.
102. Data Relating to X-ray Spectra. With a Brief Statement of Their Bearing on Theories of the Structure of Atoms and the Mechanism of Radiation — William Duane.
Bulletin of the National Research Council, 1920, Vol. 1, p. 383.
103. Bone Sarcoma. An Analysis of the Cases Admitted to the Massachusetts General and the Collis P. Huntington Memorial Hospitals, from January 1, 1911, to January 1, 1921 — Robert B. Greenough, Channing C. Simmons and Torr W. Harmer.
Journal of Orthopædic Surgery, 1921, Vol. 3, p. 602.
104. Radium in Cancer of the Bladder — George Gilbert Smith.
Surgery, Gynecology and Obstetrics, 1921, Vol. 33, p. 570.
105. The Basal Metabolism in Myelogenous Leukemia and Its Relation to the Blood Findings — Arthur H. Gunderson.
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106. Radical Treatment of Cancer of the Bladder — George Gilbert Smith.
The Journal of Urology, 1921, Vol. 6, p. 173.
107. Megacaryocytes in the Peripheral Circulation — George Richards Minot.
Journal of Experimental Medicine, 1922, Vol. 35, p. 1.
108. X-ray Spectra Produced Under Various Experimental Conditions —
William Duane.
Journal of Radiology, 1922, Vol. 3, p. 69.
109. Roentgen Rays of Short Wave-Lengths and their Measurement —
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American Journal of Roentgenology, 1922, Vol. 9, p. 167.
110. Treatment of Cancer of the Bladder by Radium Implantation — George
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111. Management of Cancer of the Bladder — George Gilbert Smith.
Boston Medical and Surgical Journal, 1922, Vol. 187, p. 97.
112. Carcinoma of the Antrum. Treatment by Radium. Statistics and
Technique — D. Crosby Greene.
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113. Radium Treatment of Keloids — Ernest M. Daland.
Surgery, Gynecology and Obstetrics, 1923, Vol. 36, p. 63.
114. The Results of Operations for Cancer of the Lip at the Massachusetts
General Hospital from 1909 to 1919 — Channing C. Simmons and
Ernest M. Daland.
Surgery, Gynecology and Obstetrics, 1922, Vol. 35, p. 766.
115. The Electrical Response of the Eye and Optic Nerve under Stimulation
by Light — E. L. Chaffee, W. T. Bovie and Alice Hampson.
Journal of the Optical Society of America and Review of Scientific
Instruments, 1923, Vol. 7, p. 1.
116. New Experiments on the Sensitization of Protoplasm to Heat by Exposure
to Light of Short Wave-Length — W. T. Bovie and G. A. Daland.
American Journal of Physiology, 1923, Vol. 66, p. 55.
117. Further Experiments on the Sensitization to Heat Due to Exposure of
Short Wave-Lengths — H. S. Forbes and G. A. Daland.
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118. A New Vessel for Electrometric Titration — W. T. Bovie.
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119. Note Regarding Potential Differences between Cells and the Fluids
Bathing Them with a Suggestion as to Terminology — Stuart Mudd.
(Not published.)
120. Factors Affecting Filtration through Berkefeld Candles. 1. Motility
and Size as Influencing Relative Filterability of *V. Percolans* and *V.*
Cholerae Asiaticæ — Stuart Mudd.
Journal of Bacteriology, 1923, Vol. 8, p. 459.
121. A Readily Cultivable *Vibrio*, Filterable through Berkefeld V. Candles,
Vibrio Percolans (New Species) — Stuart Mudd and Shields Warren.
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122. Notes on the Potential Difference between Glass and Electrolytes in
Contact with the Glass — Walter Hughes.
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123. The Scientific Basis of Short Wave-Length Therapy — William Duane.
American Journal of Roentgenology, 1922, Vol. 9, p. 781.
124. Rouleaux Formation of Red Cells in Various Types of Disease — David
Brewster Swift.
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125. Measurement of Dosage by Means of Ionization Chambers — William
Duane.
The American Journal of Roentgenology, 1923, Vol. 10, p. 399.
126. Cancer of the Prostate — George Gilbert Smith.
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The American Journal of Medical Sciences, August, 1924, Vol. CIXVIII, No. 2, p. 215.
128. The Penetration of Bacteria through Capillary Spaces. I. Motility and Size as Influencing Filterability through Berkefeld Candles — Stuart Mudd.
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129. A Source of Trouble in Electrometric Measurements of H Concentration — W. T. Bovie and Walter S. Hughes.
Journal of the American Chemical Society No. 8, August, 1923, Vol. XLV, p. 1904.
130. Erythremia (Polycythemia Rubra Vera). The Development of Anemia; the Relation to Leukemia; Consideration of the Basal Metabolism, Blood Formation and Destruction, and Fragility of the Red Cells — George R. Minot and Thomas E. Buckman.
The American Journal of the Medical Sciences, October, 1923, Vol. CLXVI, p. 469.
131. A Spark Gap with Air Cooled Electrodes — W. T. Bovie.
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132. Germanium Dioxide as a Remedy for Anemia — George R. Minot and John J. Sampson.
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133. A Stimulating Effect of the Photocytolytic Products of Protoplasm — C. E. Barr.
Journal of Medical Research, June, 1923, Vol. XLIV, p. 79.
134. The Influence of Hemorrhage, Transfusion and Irradiation on Red Cell Production — Raphael Isaacs.
The Cincinnati Journal of Medicine, April, 1924, Vol. V, No. 2, p. 83.
135. The Electrometric Method of Measuring Acidity and Alkalinity — W. T. Bovie.
Journal of the Optical Society of America and Review of Scientific Instruments, January, 1924, Vol. 8, p. 149.
136. Cancer: Delay in Its Surgical Treatment — Channing C. Simmons and E. M. Daland.
Boston Medical and Surgical Journal, January, 1924, Vol. 190, p. 15.
137. An Automatic Focussing Device for Photomicrography with Ultra-Violet Light or Light of any Wave-Length — W. T. Bovie and C. E. Barr.
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138. Methods of Making Temperature Corrections in Direct Reading Potentiometers for Measuring Hydrogen-Ion Concentrations — W. T. Bovie.
Journal of the Optical Society of America, December, 1923, Vol. 7, p. 1235.
139. Ultra-Violet Cytolysis of Protoplasm — C. E. Barr and W. T. Bovie.
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140. The Penetration of Bacteria through Capillary Spaces. II — Shields Warren and Stuart Mudd.
Journal of Bacteriology, March, 1924, Vol. 9, No. 2, pp. 143-149.
141. The Penetration of Bacteria through Capillary Spaces. III — Shields Warren and Stuart Mudd.
Journal of Bacteriology, March, 1924, Vol. 9, No. 2, pp. 143-149.
142. Ionization Methods of Measuring X-ray Dosage — William Duane.
American Journal of Roentgenology and Radium Therapy, December 1923, Vol. X, p. 935.
143. Chronic Myelogenous Leukemia — George R. Minot, Raphael Isaacs and Thomas E. Buckman.
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144. Effects of Varying the Wave-Length of the Stimulating Light upon the Electrical Response of the Retina — E. L. Chafee and Alice Hampson.
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145. Blood Phosphorus: Its Relation to Cancer and Anemia — Thomas E. Buckman, George R. Minot, Geneva A. Daland and Margaret Weld.
Archives of Internal Medicine, August, 1924, Vol. 34, pp. 181-190.
146. The Metabolism-Pulse Ratio in Exophthalmic Goiter and in Leukemia. (With Remarks on Certain Similarities in the Symptomatology of These Diseases) — George R. Minot and James Howard Means.
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147. Lymphatic Leukemia: Age Incidence, Duration and Benefit Derived from Irradiation — George R. Minot and Raphael Isaacs.
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